



# PHIN Messaging System (PHINMS)

## Technical Workshop

PHINMS Version 2.1  
May 2004

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# Agenda



- Brief overview of PHINMS
- Software Installation and configuration
  - ◆ Sender
  - ◆ Receiver
- Open “workshop” forum (Ask questions at any time)

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# PHINMS



- CDC's implementation of the ebXML 2.0 messages service standards
- Runs on Windows Unix, Linux
- A separable part of the NEDSS Base System
- Java based client and server

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# What is ebXML



- ebXML Messaging Service is a robust messaging framework for commerce
- HL7 approved ebXML messaging as a draft standard for trial use
- Can send all types of files, not just XML

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# Why ebXML



- Confidentiality
  - ◆ Information remains private between two parties
- Authenticity
  - ◆ Ensured identity
- Data Integrity
  - ◆ Data has not been changed in transit
- Non-repudiation
  - ◆ Can not deny sending or receiving message

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# PHINMS 2.1 Sender



- Capable of sending messages (of any type) from behind firewalls
- Able to run on a typical workstation as well as a server
- Can poll for messages from a PHINMS 2.1 Receiver (or other) appropriately configured
- Queue Monitor deployed with client

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# PHINMS 2.1 Receiver

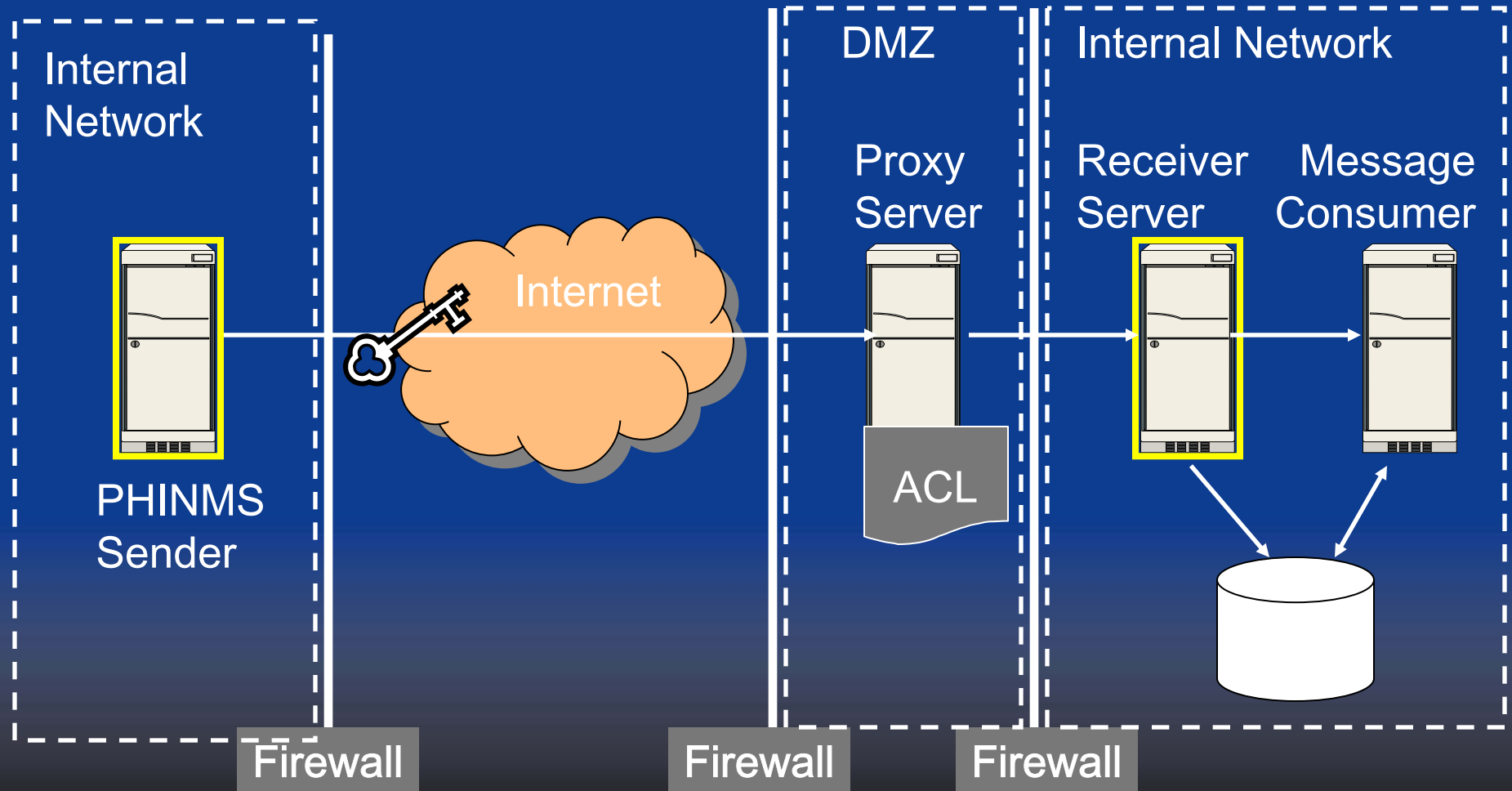


- Runs on a J2EE Application Server configured as a web service
- Able to receive messages at any time
- Supports queue (DBMS table) based interface or custom message handler
- Will support certificate based, password based or SDN authentication

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# Infrastructure

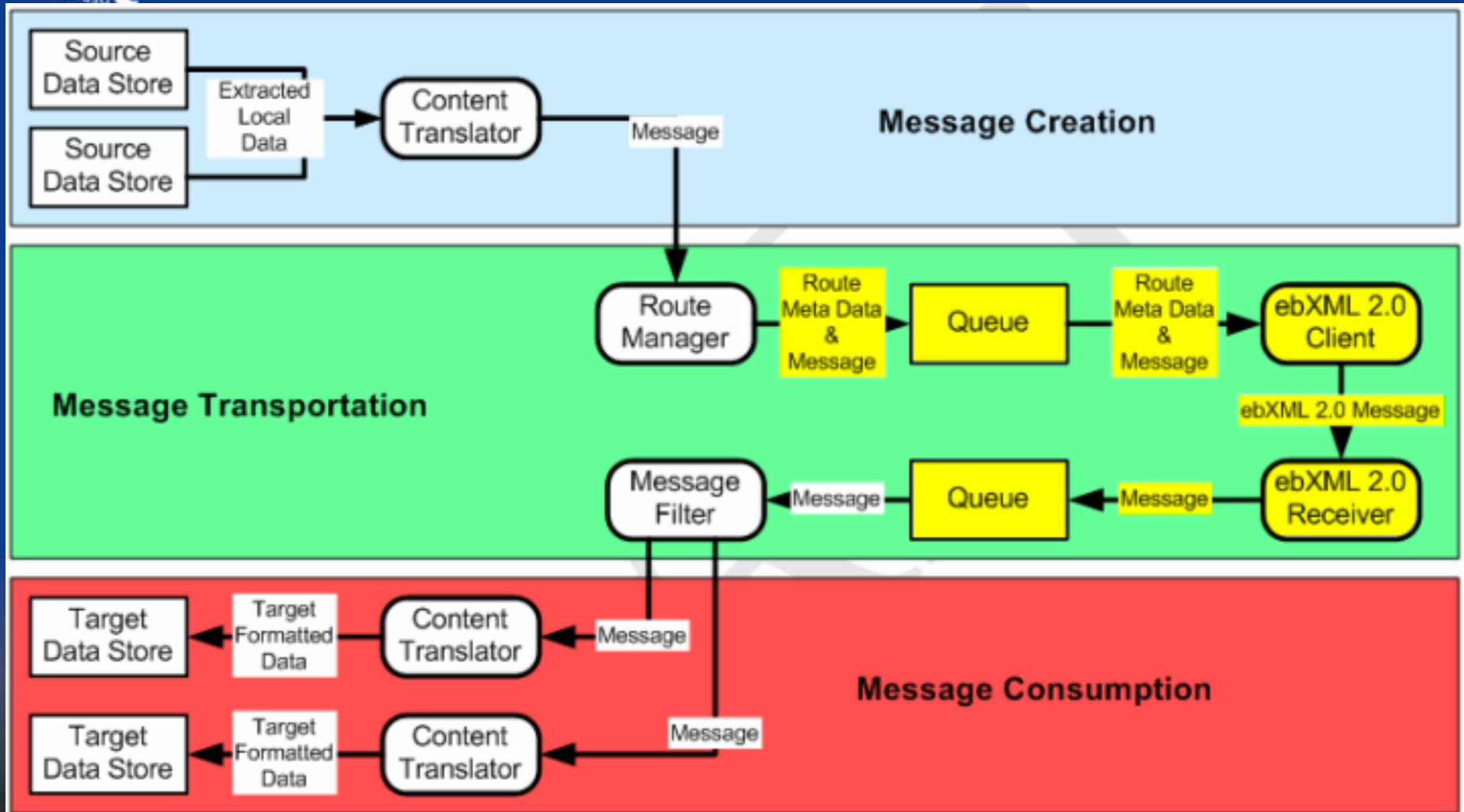


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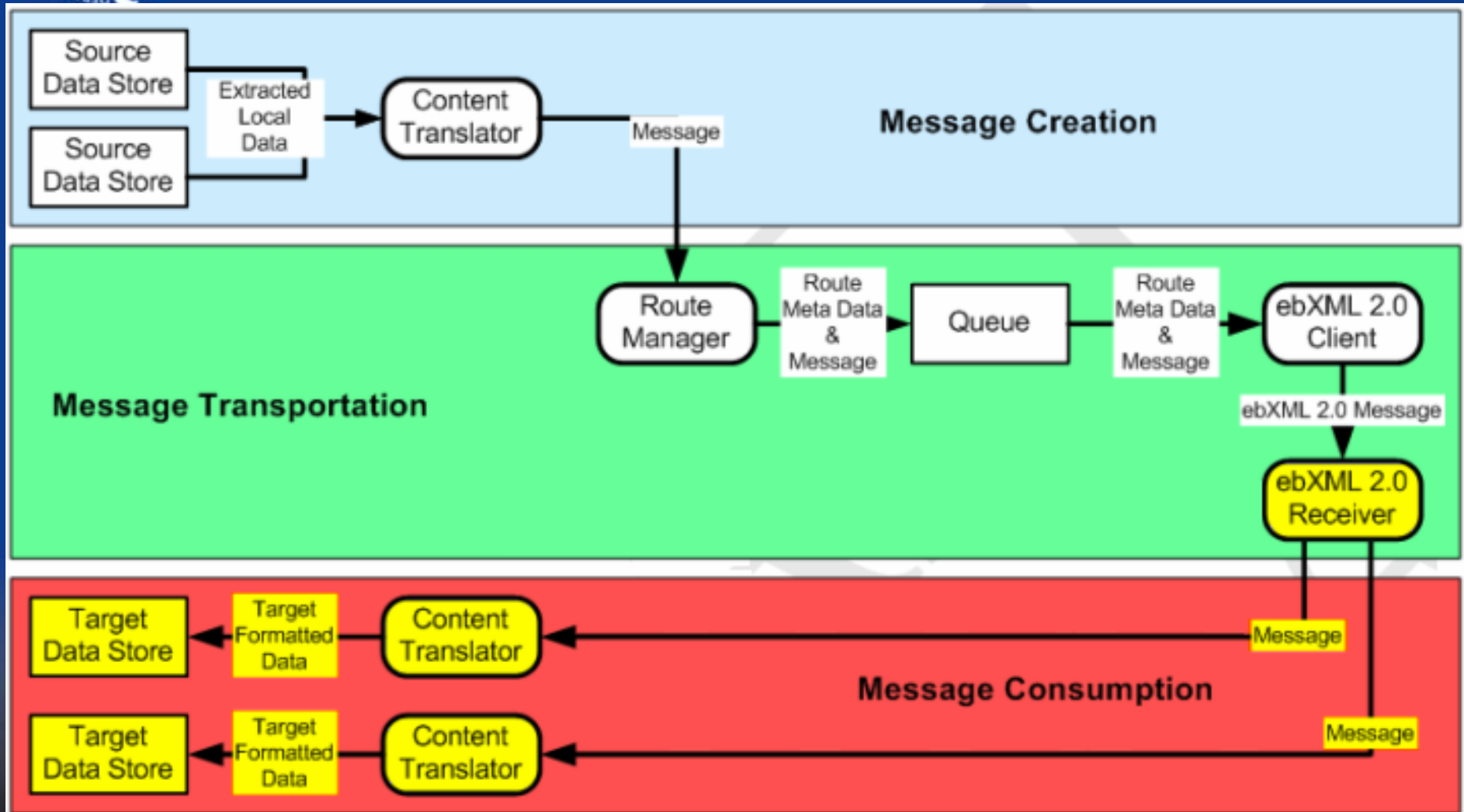
# Data Exchange



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# Data Exchange



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# Downloading PHINMS Software

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# Create PHINMS Directory

A screenshot of a Windows Command Prompt window. The title bar reads "Command Prompt". The command prompt shows the command "C:\>mkdir phinms\_" being entered. The window has standard Windows window controls (minimize, maximize, close) in the top right corner and a scroll bar on the right side. The command prompt area is light gray, and the text is black. The cursor is at the end of the command line.

```
C:\>mkdir phinms_
```

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# ftp sftp.cdc.gov



```
Command Prompt - ftp sftp.cdc.gov

C:\>ftp sftp.cdc.gov
Connected to sftp.cdc.gov.
220 Serv-U FTP Server v4.0 for WinSock ready...
User (sftp.cdc.gov:(none)): _
```

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# Enter User Name: phinusr



```
Command Prompt - ftp sftp.cdc.gov

C:\>ftp sftp.cdc.gov
Connected to sftp.cdc.gov.
220 Serv-U FTP Server v4.0 for WinSock ready...
User (sftp.cdc.gov:(none)): phinusr_
```

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# Password: MsSys4U\*



```
Command Prompt - ftp sftp.cdc.gov

C:\>ftp sftp.cdc.gov
Connected to sftp.cdc.gov.
220 Serv-U FTP Server v4.0 for WinSock ready...
User (sftp.cdc.gov:(none)): phinusr
331 User name okay, need password.
Password:
230 User logged in, proceed.
ftp> _
```

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# cd phinms2.1\install



```
Command Prompt - ftp sftp.cdc.gov

C:\>ftp sftp.cdc.gov
Connected to sftp.cdc.gov.
220 Serv-U FTP Server v4.0 for WinSock ready...
User (sftp.cdc.gov:(none)): phinusr
331 User name okay, need password.
Password:
230 User logged in, proceed.
ftp> cd phinms2.1\install
250 Directory changed to /phinms2.1/install
ftp>
```





# binary



```
C:\ Command Prompt - ftp sftp.cdc.gov
Password:
230 User logged in, proceed.
ftp> cd phinms2.1\install
250 Directory changed to /phinms2.1/install
ftp> dir
200 PORT Command successful.
150 Opening ASCII mode data connection for /bin/ls.
drw-rw-rw-  1 user      group           0 Feb 22 22:43 .
drw-rw-rw-  1 user      group           0 Feb 22 22:43 ..
-rw-rw-rw-  1 user      group    98206286 Feb 20 15:31 Win32Setup2.1
-rw-rw-rw-  1 user      group     581632 Feb 20 15:33 sender.mdb
-rw-rw-rw-  1 user      group    8716155 Feb 22 22:49 server.exe
226 Transfer complete.
ftp: 325 bytes received in 0.00Seconds 325000.00Kbytes/sec.
ftp> binary
```



# lcd C:\phinms



```
Command Prompt - ftp sftp.cdc.gov

ftp> dir
200 PORT Command successful.
150 Opening ASCII mode data connection for /bin/ls.
drw-rw-rw-   1 user      group           0 Feb 22 22:43 .
drw-rw-rw-   1 user      group           0 Feb 22 22:43 ..
-rw-rw-rw-   1 user      group    98206286 Feb 20 15:31 Win32Setup2.1
-rw-rw-rw-   1 user      group     581632 Feb 20 15:33 sender.mdb
-rw-rw-rw-   1 user      group     8716155 Feb 22 22:49 server.exe
226 Transfer complete.
ftp: 325 bytes received in 0.00Seconds 325000.00Kbytes/sec.
ftp> binary
200 Type set to I.
ftp> lcd C:\phinms
Local directory now C:\PHINMS.
ftp>
```



# mget \*.\*



```
Command Prompt - ftp sftp.cdc.gov

226 Transfer complete.
ftp: 325 bytes received in 0.00Seconds 325000.00Kbytes/sec.
ftp> binary
200 Type set to I.
ftp> dir
200 PORT Command successful.
150 Opening ASCII mode data connection for /bin/ls.
drw-rw-rw-  1 user      group           0 Feb 22 22:43 .
drw-rw-rw-  1 user      group           0 Feb 22 22:43 ..
-rw-rw-rw-  1 user      group    98206286 Feb 20 15:31 Win32Setup2.1
-rw-rw-rw-  1 user      group     581632 Feb 20 15:33 sender.mdb
-rw-rw-rw-  1 user      group     8716155 Feb 22 22:49 server.exe
226 Transfer complete.
ftp: 325 bytes received in 0.00Seconds 325000.00Kbytes/sec.
ftp> mget *.*_
```



# Installing and Configuring PHINMS Sender (Client)

Version 2.1

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# Objectives

- Install PHINMS Sender
- Configure Sender
  - ◆ Configuration Files
  - ◆ Password Management
  - ◆ Database Connectivity
- Run Sender
- Run Queue Monitor



# Win32Setup2.1.exe



Installer



## Welcome to the InstallShield Wizard for Public Health Information Network Messaging System - Release 2.1

The InstallShield Wizard will install Public Health Information Network Messaging System - Release 2.1 on your computer.  
To continue, click Next.

Public Health Information Network Messaging System - Release 2.1

InstallShield

Next >

Cancel

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# Enter Directory



Installer



Click Next to install "Public Health Information Network Messaging System - Release 2.1" to this directory, or click Browse to install to a different directory.

Directory Name:

C:\PHINMS\client

Browse...

InstallShield

< Back

Next >

Cancel

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# Enter OID



Installer



Please Enter your Party ID and Domain below. Your Party ID uniquely identifies you within the Message Transport System. For domain name, use your Internet domain name (e.g., cdc.gov). If you have not been assigned a Party ID, then please contact your CDC/NEDSS representative.

Party ID:

My OID

InstallShield

< Back

Next >

Cancel

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# Typical Install




Installer

Choose the setup type that best suits your needs.

☒ Typical

 The program will be installed with the suggested configuration.  
Recommended for most users.

☐ Custom

 The program will be installed with the features you choose.  
Recommended for advanced users.

InstallShield

< Back Next > Cancel

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# Run Install

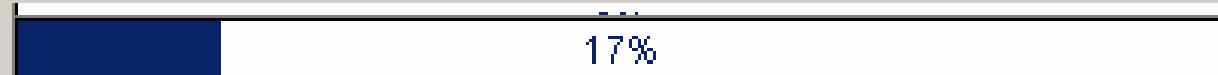


Installer



**Installing Public Health Information Network Messaging System**  
- Release 2.1... Please wait.

C:\PHINMS\client\lib\jdk1.4\re...\jaxm-client.jar



Cancel

InstallShield

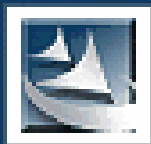
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# Install Complete



Installer



The InstallShield Wizard has successfully installed  
Public Health Information Network Messaging System -  
Release 2.1. Click Finish to exit the wizard.

InstallShield

Finish

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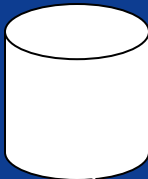


# Sender Components



PHINMS Sender

Java Runtime Environment



PHINMS  
Sender Database  
(MS Access)

Sender  
Configuration File

Passwords

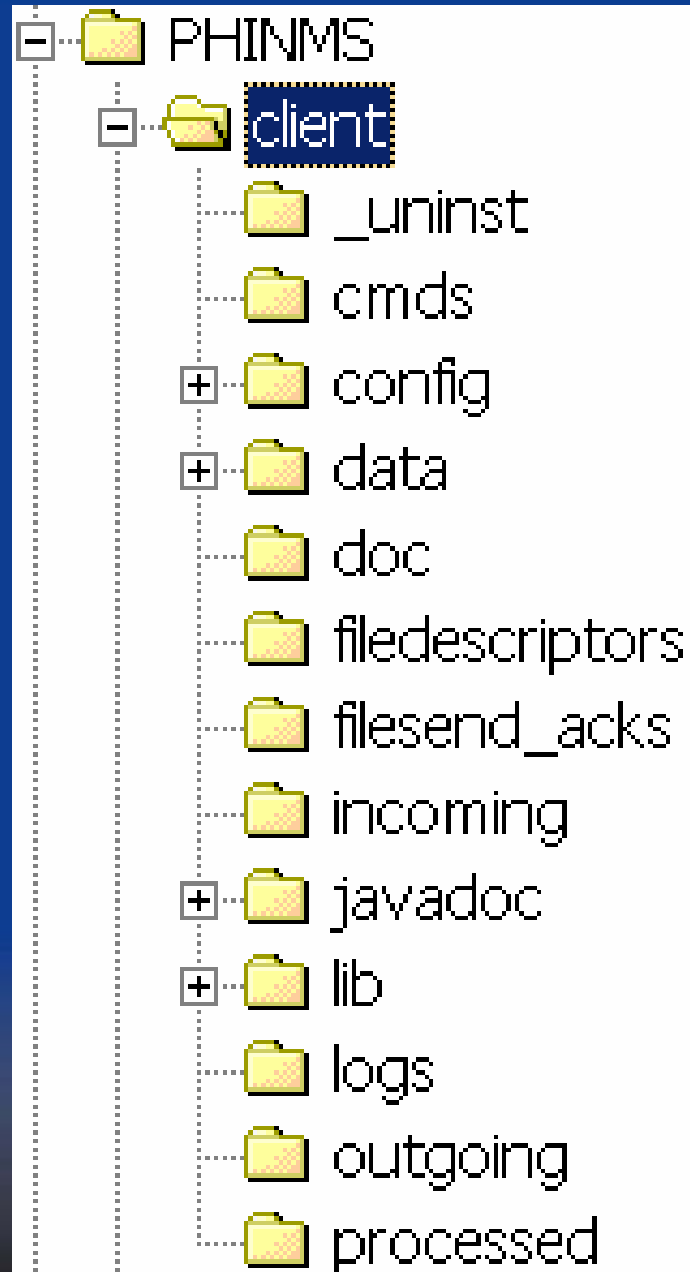
Routing Configuration  
Files

Keystore

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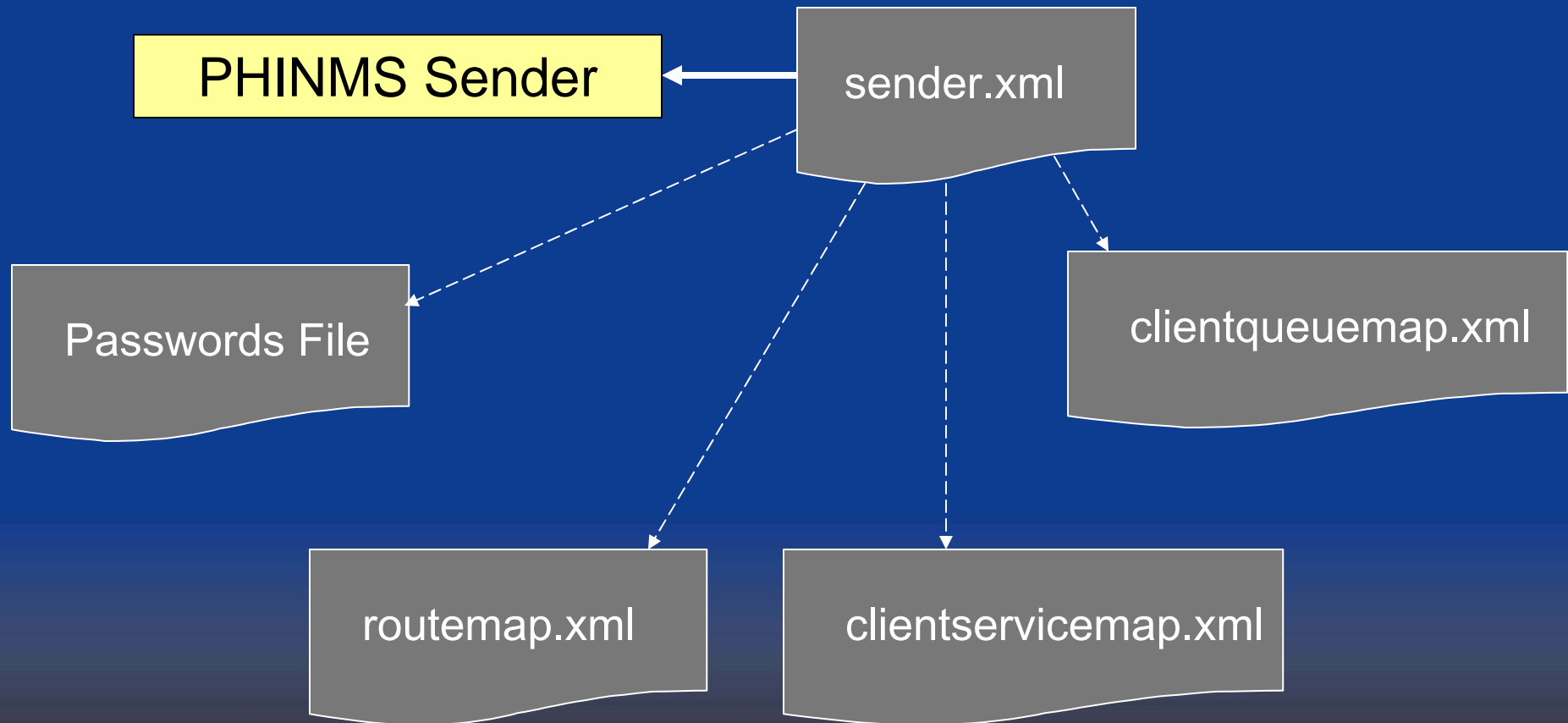
# Sender Directory Structure



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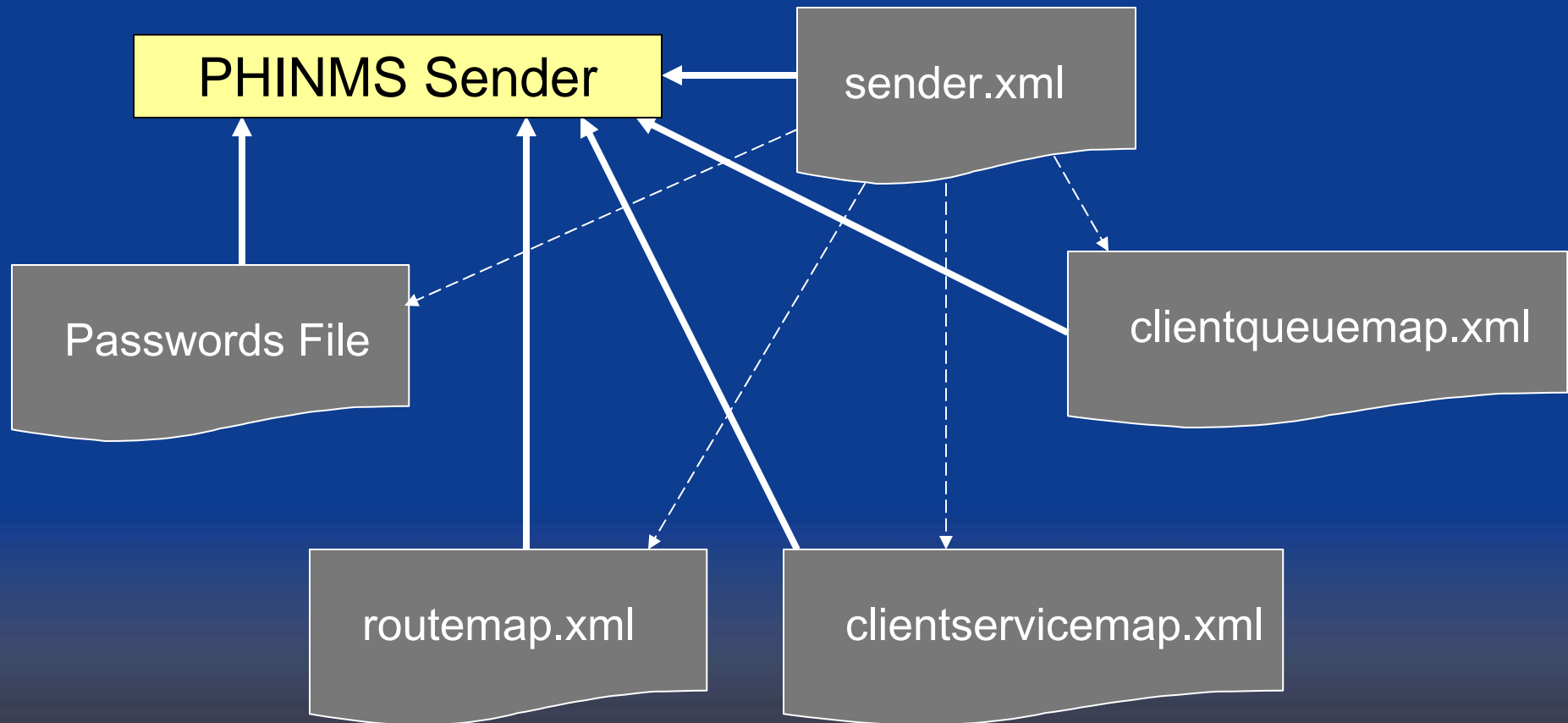
# Sender Configuration Files



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# Sender Configuration Files



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```
<Sender>

<installDir>C:\\PHINMS\\client\\</installDir>
<filePoll>false</filePoll>
<dbPoll>true</dbPoll>
<routeNotReadPoll>false</routeNotReadPoll>
<test>false</test>

<passwordFile>config\\passwd</passwordFile>
<maxAttempts>1000</maxAttempts>

<!-- possible values for filePollMode are { once, loop } -->
<filePollMode>loop</filePollMode>

<filePollInterval>30</filePollInterval>
<fileDescriptorDir>filedescriptors\\</fileDescriptorDir>

<!-- fileDescriptor XML, nameValue -->
<fileDescriptorFormat>nameValue</fileDescriptorFormat>

<!-- sqlserver, oracle, fositex -->
<dbType>access</dbType>

<!-- possible values for dbPollMode are { once, loop } -->
<dbPollMode>loop</dbPollMode>
```

# sender.xml

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# Password File

- System passwords
  - ◆ Database user names and passwords
  - ◆ Keystore passwords
  - ◆ Authentication user names and passwords
  - ◆ System Startup password
- PHINMS reads encrypted version of passwords file



# passwords.xml



```
<?xml version="1.0"?>
<passwordFile>

<trustStorePass>changeit</trustStorePass>

<keyStorePasswd></keyStorePasswd>

<accessDbUser> </accessDbUser>
<accessDbPasswd> </accessDbPasswd>

<sqlServerDbUserLocal>receiver</sqlServerDbUserLocal>
<sqlServerDbPasswdLocal>receiver</sqlServerDbPasswdLocal>

<oracleDbUserLocal>receiver</oracleDbUserLocal>
<oracleDbPasswdLocal>receiver</oracleDbPasswdLocal>

</passwordFile>
```



# Password Management



```
Command Prompt - pbe.bat
C:\PHINMS\client\cmds>pbe.bat
C:\PHINMS\client\cmds>call setenv.bat
C:\PHINMS\client\cmds>set installDir=C:\PHINMS\client\
C:\PHINMS\client\cmds>set PROJLIB=C:\PHINMS\client\lib
C:\PHINMS\client\cmds>set JAVA_HOME=C:\PHINMS\client\lib\jdk
C:\PHINMS\client\cmds>set PATH=C:\PHINMS\client\lib\jdk1.4\bin
system32
C:\PHINMS\client\cmds>java -Xmx256M gov.cdc.nedss.services.s
BE
Encrypt / Decrypt (Enter eid):
```

passwords.xml

```
<?xml version="1.0"?>
<passwordFile>
  <dbUser>receiver</dbUser>
  <dbPasswd>mypassword</dbPasswd>
</passwordFile>
```

passwords



## PBE Utility

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Command Prompt - pbe.bat

```
C:\PHINMS\client\cmds>pbe.bat
```

```
C:\PHINMS\client\cmds>call setenv.bat
```

```
C:\PHINMS\client\cmds>set installDir=C:\PHINMS\client\
```

```
C:\PHINMS\client\cmds>set PROJLIB=C:\PHINMS\client\lib
```

```
C:\PHINMS\client\cmds>set JAVA_HOME=C:\PHINMS\client\lib\jdk
```

```
C:\PHINMS\client\cmds>set PATH=C:\PHINMS\client\lib\jdk1.4\b  
\system32
```

```
C:\PHINMS\client\cmds>java -Xmx256M gov.cdc.nedss.services.s  
BE
```

```
Encrypt / Decrypt (Enter eld):
```

# PBE Utility

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Command Prompt - pbe.bat

```
C:\PHINMS\client\cmds>call setenv.bat
```

```
C:\PHINMS\client\cmds>set installDir=C:\PHINMS\client\
```

```
C:\PHINMS\client\cmds>set PROJLIB=C:\PHINMS\client\lib
```

```
C:\PHINMS\client\cmds>set JAVA_HOME=C:\PHINMS\client\lib\jdk
```

```
C:\PHINMS\client\cmds>set PATH=C:\PHINMS\client\lib\jdk1.4\b  
\system32
```

```
C:\PHINMS\client\cmds>java -Xmx256M gov.cdc.nedss.services.s  
BE
```

```
Encrypt / Decrypt (Enter e/d): e
```

```
Plaintext Input File: passwords.xml
```

```
Ciphertext Output File: passwords
```

# PBE Utility

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```
<Sender>
<installDir>C:\\\\PHINMS\\client\\\\</installDir>
<filePoll>false</filePoll>
<dbPoll>true</dbPoll>
<routeNotReadPoll>false</routeNotReadPoll>
<test>false</test>
<passwordFile>config\\passwds</passwordFile>
<maxAttempts>1000</maxAttempts>

<!-- possible values for filePollMode are { once, loop } -->
<filePollMode>loop</filePollMode>

<filePollInterval>30</filePollInterval>
<fileDescriptorDir>filedescriptors\\\\</fileDescriptorDir>

<!-- fileDescriptor XML, nameValue -->
<fileDescriptorFormat>nameValue</fileDescriptorFormat>

<!-- sqlserver, oracle, fositex -->
<dbType>access</dbType>

<!-- possible values for dbPollMode are { once, loop } -->
<dbPollMode>loop</dbPollMode>
```

# sender.xml

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```
<Sender>

<installDir>C:\\\\PHINMS\\client\\\\</installDir>
<filePoll>false</filePoll>
<dbPoll>true</dbPoll>
<routeNotReadPoll>false</routeNotReadPoll>
<test>false</test>

<passwordFile>config\\passwd</passwordFile>
<maxAttempts>1000</maxAttempts>

<!-- possible values for filePollMode are { once, loop } -->
<filePollMode>loop</filePollMode>

<filePollInterval>30</filePollInterval>
<fileDescriptorDir>filedescriptors\\\\</fileDescriptorDir>

<!-- fileDescriptor XML, nameValue -->
<fileDescriptorFormat>nameValue</fileDescriptorFormat>

<!-- sqlserver, oracle, fositex -->
<dbType>access</dbType>

<!-- possible values for dbPollMode are { once, loop } -->
<dbPollMode>loop</dbPollMode>
```

# sender.xml

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```
<!-- MS Access Settings example -->
<jdbcDriver>sun.jdbc.odbc.JdbcOdbcDriver</jdbcDriver>
<databaseUrlPrefix>jdbc:odbc:</databaseUrlPrefix>
<databaseUrlSuffix>sender</databaseUrlSuffix>
<messageTable>TransportQ_out</messageTable>
<databaseUser>accessdbUser</databaseUser>
<databasePasswd>accessdbPasswd</databasePasswd>

<!-- MS SQL Server Example
<jdbcDriver>com.microsoft.jdbc.sqlserver.SQLServerDriver</jdbcDriver>
<databaseUrlPrefix>jdbc:microsoft:sqlserver:</databaseUrlPrefix>
<databaseUrlSuffix>//nedss-sql3:1433;DatabaseName=Phmsg</databaseUrlSuffix>
<messageTable>TransportQ_out</messageTable>
<databaseUser>sqlServerDbUser</databaseUser>
<databasePasswd>sqlServerDbPasswd</databasePasswd>
-->

<!-- Oracle Server Example
<jdbcDriver>oracle.jdbc.driver.OracleDriver</jdbcDriver>
<databaseUrlPrefix>jdbc:oracle:thin:</databaseUrlPrefix>
<databaseUrlSuffix>@nedss-report:1521:ebxml</databaseUrlSuffix>
<messageTable>TransportQ_out</messageTable>
<databaseUser>oracleServerDbUser</databaseUser>
<databasePasswd>oracleServerDbPasswd</databasePasswd>
-->
```

# sender.xml

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# Create ODBC Connection



- Use Windows Data Source (ODBC) utility
- Windows Start Menu navigate to
  - ◆ Settings
  - ◆ Control Panel
  - ◆ Administrative Tools
  - ◆ Data Sources (ODBC)



## ODBC Data Source Administrator



User DSN System DSN File DSN Drivers Tracing Connection Pooling About

System Data Sources:

Name	Driver
LocalServer	SQL Server

Add...

Remove

Configure...



An ODBC System data source stores information about how to connect to the indicated data provider. A System data source is visible to all users on this machine, including NT services.

OK

Cancel

Apply

Help

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# Create New Data Source



Select a driver for which you want to set up a data source.

Name	Version ▲
Driver do Microsoft Access (*.mdb)	4.00.62
Driver do Microsoft dBase (*.dbf)	4.00.62
Driver do Microsoft Excel(*.xls)	4.00.62
Driver do Microsoft Paradox (*.db )	4.00.62
Driver para o Microsoft Visual FoxPro	6.01.86
Microsoft Access Driver (*.mdb)	4.00.62
Microsoft Access-Treiber (*.mdb)	4.00.62
Microsoft dBase Driver (*.dbf)	4.00.62
Microsoft dBase VFP Driver (*.dbf)	6.01.86
Microsoft dBase-Treiber (*.dbf)	4.00.62 ▼

< Back

Finish

Cancel

ODBC Microsoft Access Setup

Data Source Name: sender

Description: PHINMS Sender Database

OK

Cancel

Select Database

Database Name

Phmsg.mdb

Phmsg.mdb

Directories:

c:\phinms\client\data

c\  
PHINMS  
client  
data  
images  
JavaHelp  
phmsg

OK

Cancel

Help

☐ Read Only

☐ Exclusive

List Files of Type:

Access Databases (\*.mdb)

Drives:

C:

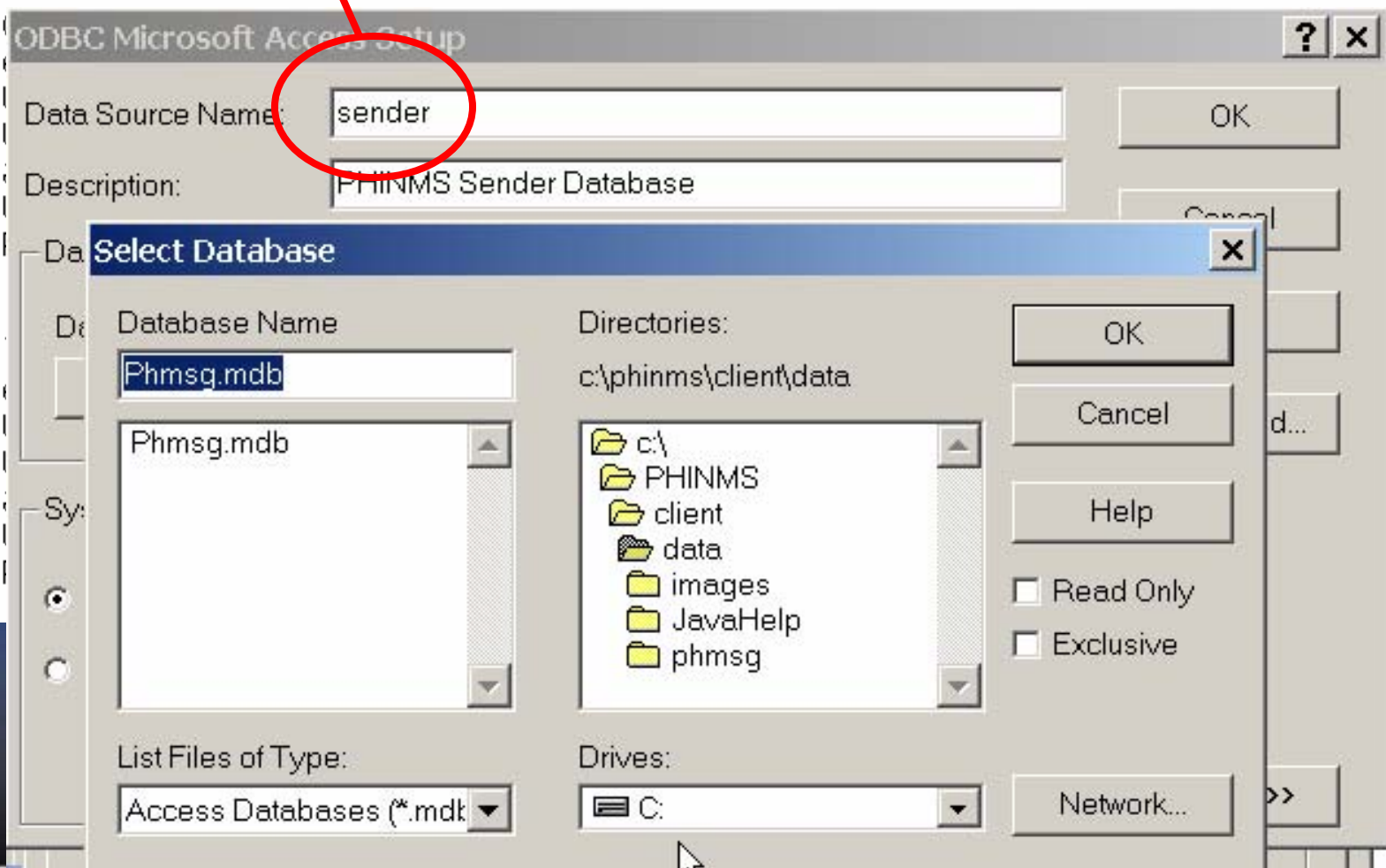
Network...

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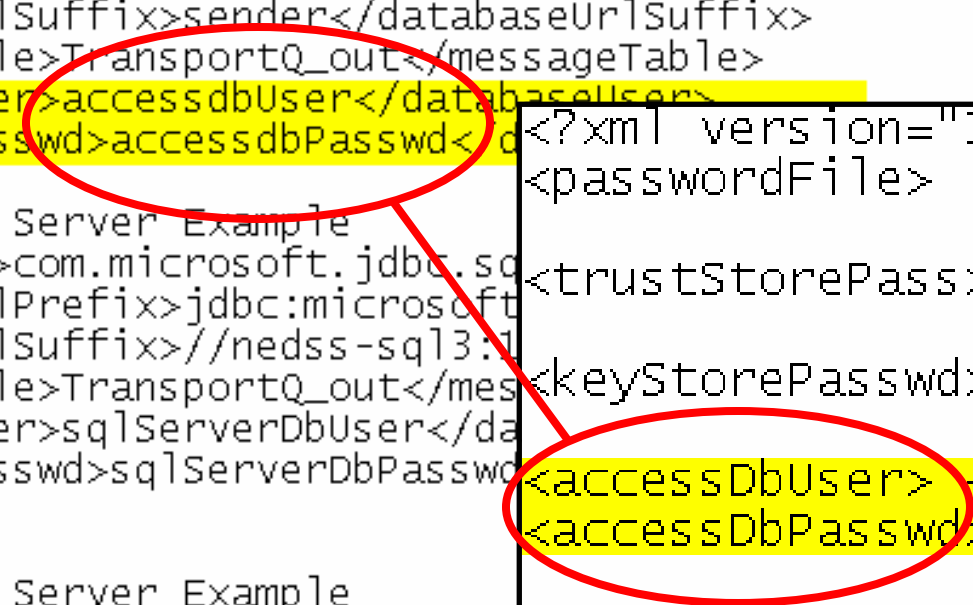
```
<!-- MS Access Settings example -->
<jdbcDriver>sun.jdbc.odbc.JdbcOdbcDriver</jdbcDriver>
<databaseUrlPrefix>jdbc:odbc:</databaseUrlPrefix>
<databaseUrlSuffix>sender</databaseUrlSuffix>
<messageTable>TransportQueue</messageTable>
<databaseUser>accessdbuser</databaseUser>
<databasePasswd>accessdbpasswd</databasePasswd>
```

```
<!-- MS SQL Server Settings example -->
<jdbcDriver>com.microsoft.jdbc.sqlserver.SQLServerDriver</jdbcDriver>
<databaseUrlPrefix>jdbc:sqlserver:</databaseUrlPrefix>
<databaseUrlSuffix></databaseUrlSuffix>
<messageTable>TransportQueue</messageTable>
<databaseUser></databaseUser>
<databasePasswd></databasePasswd>
-->
```

```
<!-- Oracle Settings example -->
<jdbcDriver>oracle.jdbc.driver.OracleDriver</jdbcDriver>
<databaseUrlPrefix>jdbc:oracle:thin:</databaseUrlPrefix>
<databaseUrlSuffix></databaseUrlSuffix>
<messageTable>TransportQueue</messageTable>
<databaseUser></databaseUser>
<databasePasswd></databasePasswd>
-->
```



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```

<!-- MS Access Settings example -->
<jdbcDriver>sun.jdbc.odbc.JdbcOdbcDriver</jdbcDriver>
<databaseUrlPrefix>jdbc:odbc:</databaseUrlPrefix>
<databaseUrlSuffix>sender</databaseUrlSuffix>
<messageTable>TransportQ_out</messageTable>
<databaseUser>accessdbUser</databaseUser>
<databasePasswd>accessdbPasswd</databasePasswd>

<!-- MS SQL Server Example -->
<jdbcDriver>com.microsoft.jdbc.sqlserver.JdbcDriver35</jdbcDriver>
<databaseUrlPrefix>jdbc:microsoft</databaseUrlPrefix>
<databaseUrlSuffix>//nedss-sql3:1433</databaseUrlSuffix>
<messageTable>TransportQ_out</messageTable>
<databaseUser>sqlServerDbUser</databaseUser>
<databasePasswd>sqlServerDbPasswd</databasePasswd>

<!-- Oracle Server Example -->
<jdbcDriver>oracle.jdbc.driver.OracleDriver</jdbcDriver>
<databaseUrlPrefix>jdbc:oracle:thin:</databaseUrlPrefix>
<databaseUrlSuffix>@nedss-report:1521</databaseUrlSuffix>
<messageTable>TransportQ_out</messageTable>
<databaseUser>oracleServerDbUser</databaseUser>
<databasePasswd>oracleServerDbPasswd</databasePasswd>

```

```

<?xml version="1.0"?>
<passwordFile>
  <trustStorePass>changeit</trustStorePass>
  <keyStorePasswd></keyStorePasswd>
  <accessDbUser></accessDbUser>
  <accessDbPasswd></accessDbPasswd>
  <sqlServerDbUserLocal>receiver</sqlServerDbUserLocal>
  <sqlServerDbPasswdLocal>receiver</sqlServerDbPasswdLocal>
  <oracleDbUserLocal>receiver</oracleDbUserLocal>
  <oracleDbPasswdLocal>receiver</oracleDbPasswdLocal>
</passwordFile>

```

# sender.xml

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```
<routeMap>config\\routemap.xml</routeMap>
<cpaLocation>config\\CPA\\</cpaLocation>

<signingCertsLocation>config\\signingcerts\\</signingCertsLocation>
<connectionTimeout>30</connectionTimeout>
<dataReadTimeout>30</dataReadTimeout>

<trustedCerts>config\\cacerts</trustedCerts>
<trustedCertsPasswd>cacertsPasswd1</trustedCertsPasswd>

<keyStore>config\\dummykeystore.pfx</keyStore>
<keyStorePasswd>keyStorePasswd1</keyStorePasswd>

<logLevel>info</logLevel>

<!-- 10Mb max log size -->
<maxLogSize>10000000</maxLogSize>
<logArchive>true</logArchive>
<logDir>logs\\</logDir>
<processedDir>processed\\</processedDir>
```

# sender.xml

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# Collaboration Protocol Agreement (CPA)

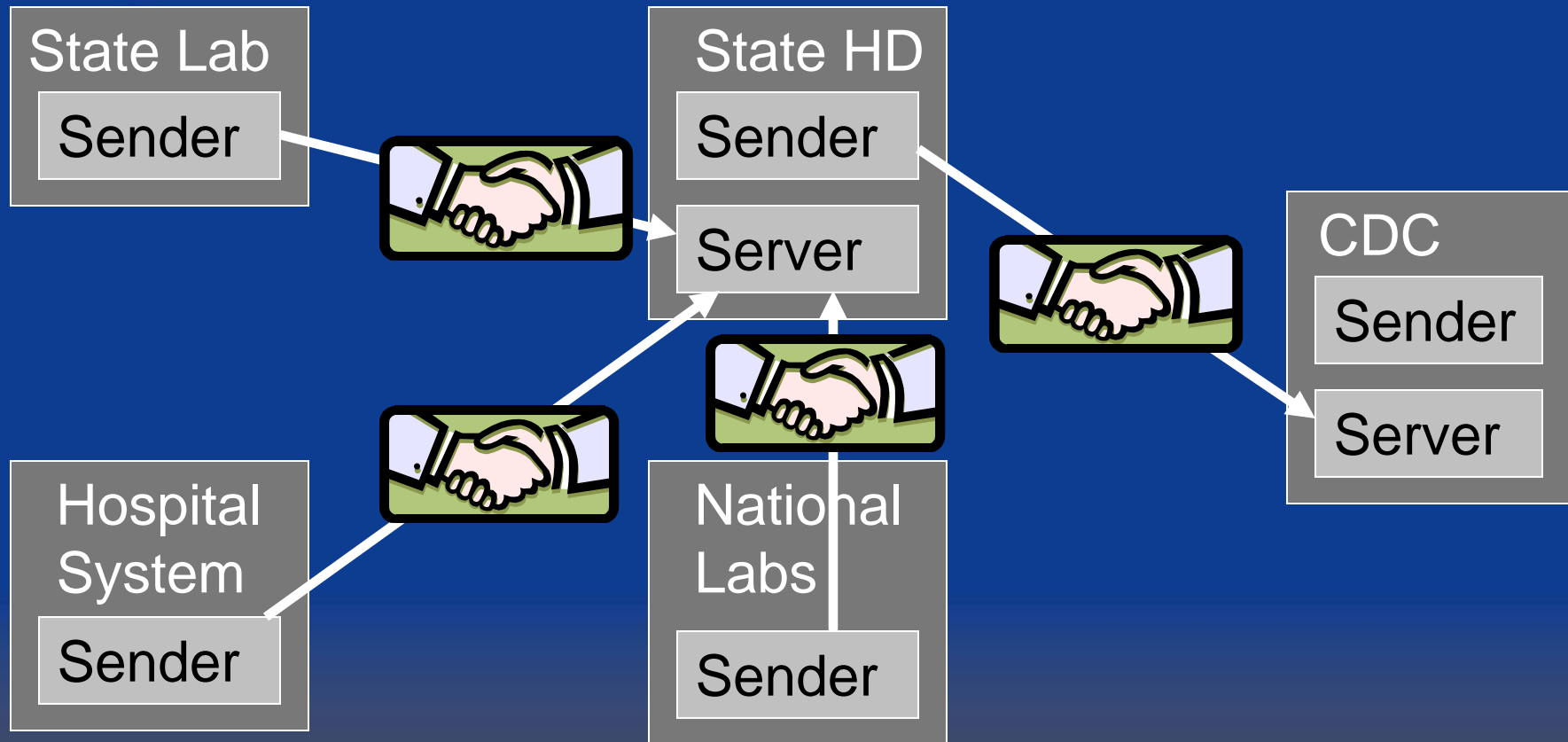


- The file must be physically located on both nodes
- PartyInfo entry for both nodes
  - ◆ partner party-ID
  - ◆ end-points (URLs)
  - ◆ security attributes
- Every node needs a CPA with every other node





# PHIN Messaging Topology

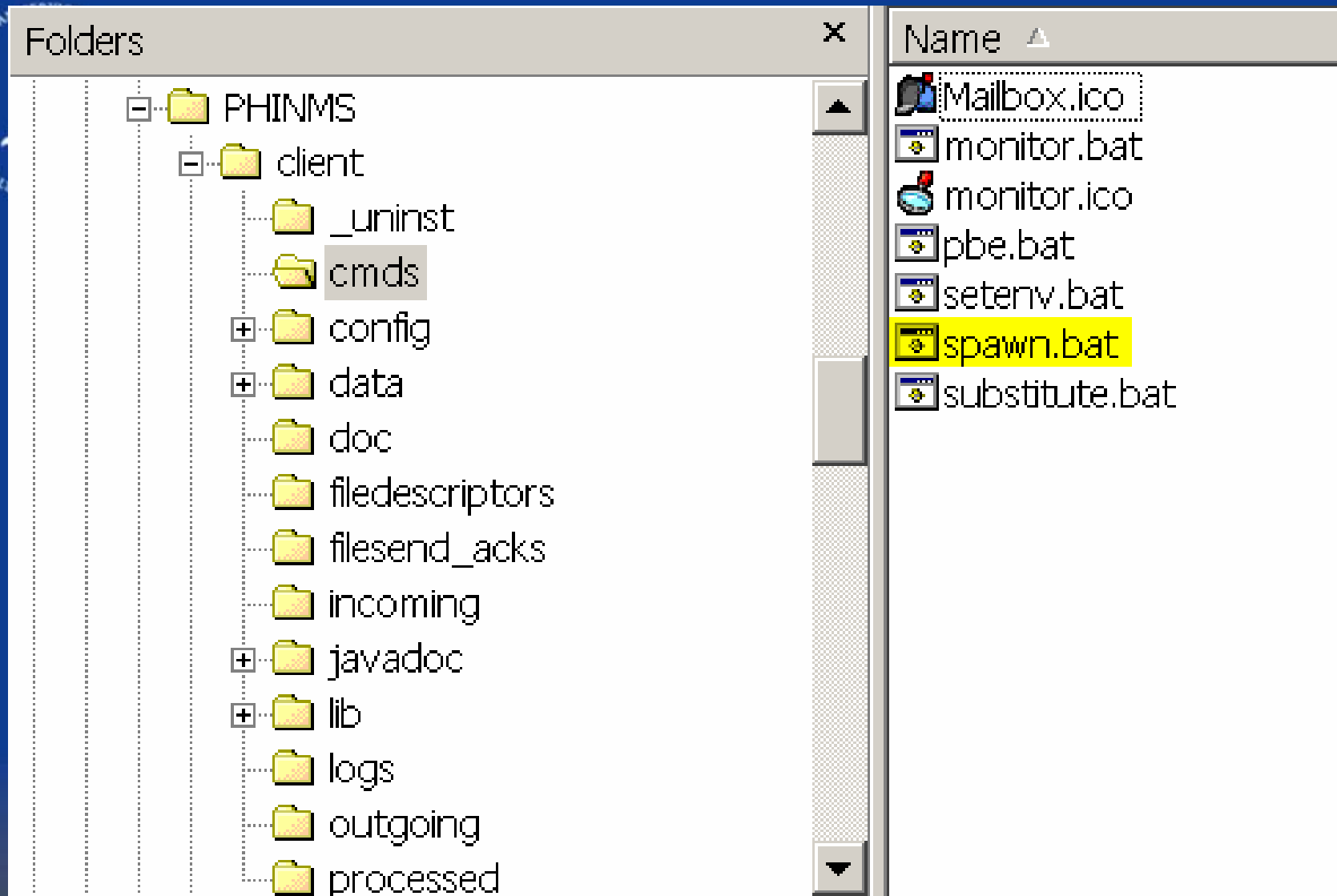


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<tp:PartyInfo>  
   <tp:PartyId tp:type="zz">cdc</tp:PartyId>  
   <tp:PartyRef xlink:type="simple" xlink:href="http://www.cdc.gov/about.html"/>  
   <tp:Transport tp:transportId="N35">  
     <tp:SendingProtocol tp:version="1.1">HTTP</tp:SendingProtocol>  
     <tp:ReceivingProtocol tp:version="1.1">HTTP</tp:ReceivingProtocol>  
     <tp:Endpoint tp:uri="sdnstg.cdc.gov/phinmstest/receivefile" tp:type="all">  
       <tp:TransportSecurity>  
         <tp:Protocol>HTTPS</tp:Protocol>  
         <tp:CertificateRef> </tp:CertificateRef>  
         <tp:authenticationType>netegrity</tp:authenticationType>  
         <!-- basic, custom, clientcert, netegrity -->  
         <tp:netegrityAuth>  
           <tp:sdnPassword>sdnPassword1</tp:sdnPassword>  
           <tp:sdnLoginPage>/certphrase/login.fcc</tp:sdnLoginPage>  
           <tp:keyStore></tp:keyStore>  
           <tp:keyStorePasswd></tp:keyStorePasswd>  
         </tp:netegrityAuth>  
         <tp:basicAuth>  
           <tp:indexPage>/test.html</tp:indexPage>  
           <tp:basicAuthUser>phmsgUser1</tp:basicAuthUser>  
           <tp:basicAuthPasswd>phmsgPasswd1</tp:basicAuthPasswd>  
         </tp:basicAuth>  
       </tp:TransportSecurity>  
     </tp:Transport>

# CPA PartyInfo Entry

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# Starting Sender

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```

C:\>Command Prompt

Directory of C:\PHINMS\client\cmds

02/24/2004  12:34p      <DIR>          .
02/24/2004  12:34p      <DIR>          ..
05/09/2003  10:46a             10,134 Mailbox.ico
05/09/2003  10:46a             156 monitor.bat
05/09/2003  10:46a            10,134 monitor.ico
05/09/2003  10:46a              79 pbe.bat
02/24/2004  12:34p             156 setenv.bat
05/09/2003  10:46a             241 spawn.bat
05/09/2003  10:46a             105 substitute.bat
              7 File(s)              21,005 bytes
              2 Dir(s) 34,639,101,952 bytes free

C:\PHINMS\client\cmds>spawn

```

# Startup Sender



```
C:\PHINMS\client\lib\jdk1.4\bin\java.exe

#####
Starting CDC PHIN-MS Version 2.1 [Release: 2003.05.01, Build 200
Thread ID: 421
#####

Please Enter MS Client Password:
```

# Startup Sender

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```
C:\PHINMS\client\lib\jdk1.4\bin\java.exe

#####
Starting CDC PHIN-MS Version 2.1 [Release: 2003.05.01, Build 200
Thread ID: 735
#####

Please Enter MS Client Password:

The MS client is waiting for messages ...

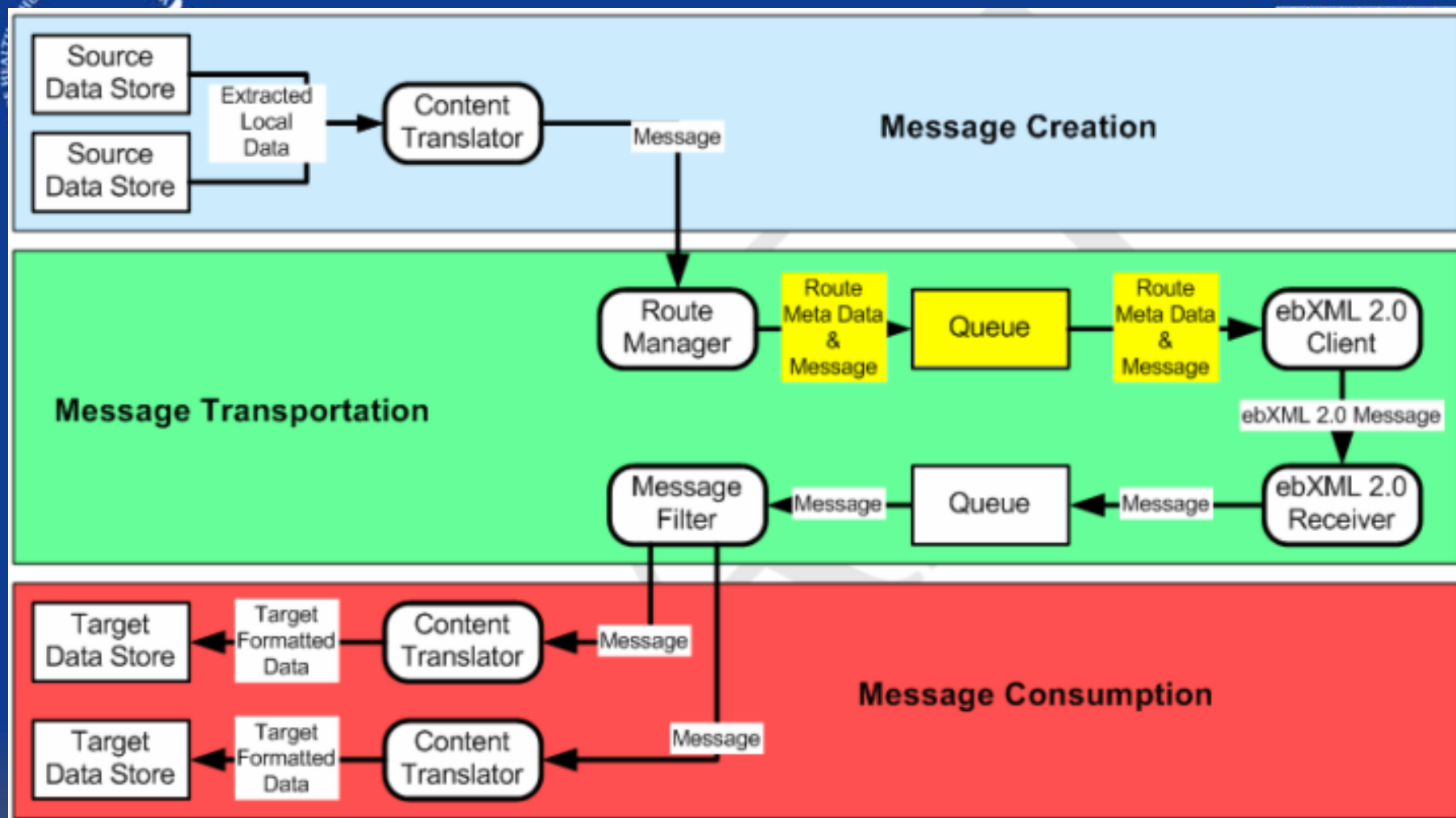
735|2/24|23:39:37|Collecting TrustStore Parameters|
735|2/24|23:39:37|Done collecting TrustStore Parameters|
735|2/24|23:39:37|Collecting KeyStore Parameters|
735|2/24|23:39:37|Done collecting KeyStore Parameters|
735|2/24|23:39:37|Loading decryption keystore|
735|2/24|23:39:37|Error loading the decryption keystore C:\\PHIN
```

# Startup Sender



# TransportQ\_out

- The interface between the message creation component and the message transport component is a relational database table



# TransportQ\_out

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recordId	Number	Unique ID of the record in the table and the table's primary key.
messageId	Text	ID of the application level message.
payloadFile	Text	Filename of the payload file of an outgoing message, relative to the root of the message directory.
payloadContent	OLE Object	This field is used only when the payloadFile field is not set.
destinationFilename	Text	The name of the payload file when it is stored on the recipient's system.
routeInfo	Text	Points to the routemap table, which points to the message destination.
service	Text	The name of the service that gets invoked by the MessageSender.
action	Text	The action or method within the service that gets invoked.
arguments	Text	Arguments sent to the service, which is invoked by the MessageSender.
messageRecipient	Text	This field is used in the route-not-read case to specify the recipient.
messageCreationTime	Text	Message creation time. Currently, the MessageSender only supports creation times in the past.
encryption	Text	Yes/No If yes, XML encryption is applied to the payload.
signature	Text	Yes/No If yes, XML signature is applied to the payload.
publicKeyLdapAddress	Text	LDAP address of the LDAP directory server.
publicKeyLdapBaseDN	Text	LDAP Base Distinguished Name of the public key, such as cn=Public Key.
publicKeyLdapDN	Text	LDAP Distinguished Name of the public key such as cn=Public Key, o=HHS.
certificateURL	Text	URL of a recipient's public key certificate. This field is used only when the recipient is a web service.
processingStatus	Text	Processing status of the record in the table. Values are: pending, success, failure.
transportStatus	Text	Transport level status. Values are: success - indicates message was successfully sent; failure - indicates message was not sent.

# TransportQ\_out

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# Processing Status

- **queued**
- **attempted**
- **sent**
- **received**
- **done**

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C:\PHINMS\client\cmds

File Edit View Favorites Tools Help

Back Search Folders

Address cmds

Folders

Northrop  
OIDS  
PHIN  
PHINMS  
client  
\_uninst  
cmds  
config

Name








Mailbox.ico  
monitor.bat  
monitor.ico  
pbe.bat  
setenv.bat  
spawn.bat  
substitute.bat

# Queue Monitor

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Message Queue Monitor

File

Process Status Count:      Queued: 1      Attempted: 1      Sent: 0      Received: 0      Done: 0  
 Transport Status Count:      ■ Failure: 0      ■ Success: 0      ■ Other: 2

Record ID	Filename	Service	Action	Route Info	Process Status	Recipient	Transport Status
1235	test.txt	Router	send	CDC	--	nedoh	--
24	--	Router	poll	CDC	attempted	nedoh	--

Record ID: --  
 Message ID: --  
 Payload Filename: --  
 Destination Filename: --  
 Route Info: --  
 Service: --  
 Action: --  
 Arguments: --

Record

# Queue Monitor

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# Installing and Configuring PHINMS Server

Version 2.1

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# Objectives

- Install PHINMS Java Components
- Configure PHINMS
- Test Configuration

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# Installing PHINMS Server

- Unzip PHINMS Receiver Components
- Configure Receiver
- Configure Receiver Database
- Install PHINMS Message Handler
- Configure Message Handler
- Test Installation

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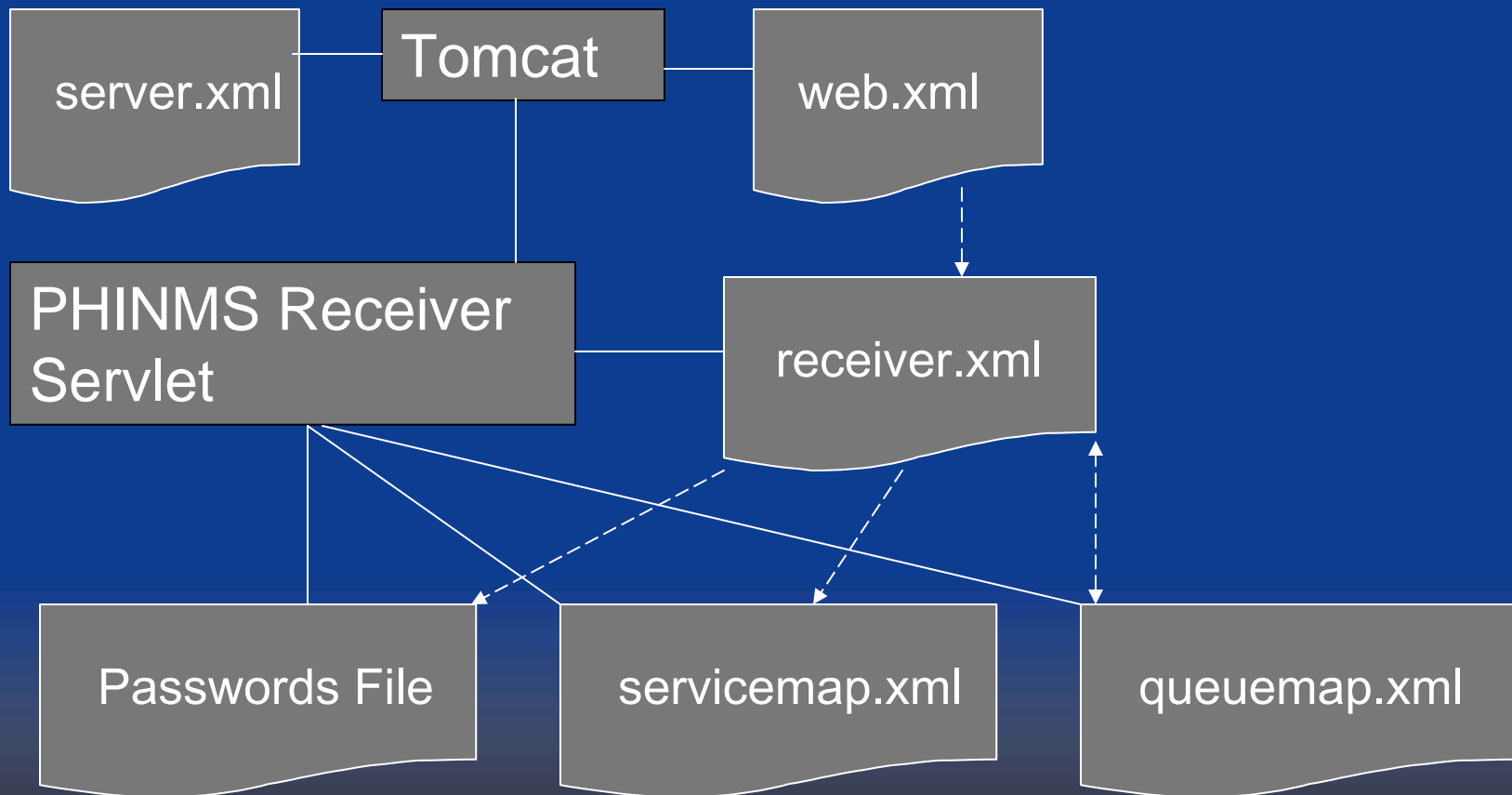
# Extract Server Files

- Run server.exe (self-extracting zip)
  - server
    - config
    - data
    - incoming
    - keystores
    - logs
    - payloaddir
    - webapps



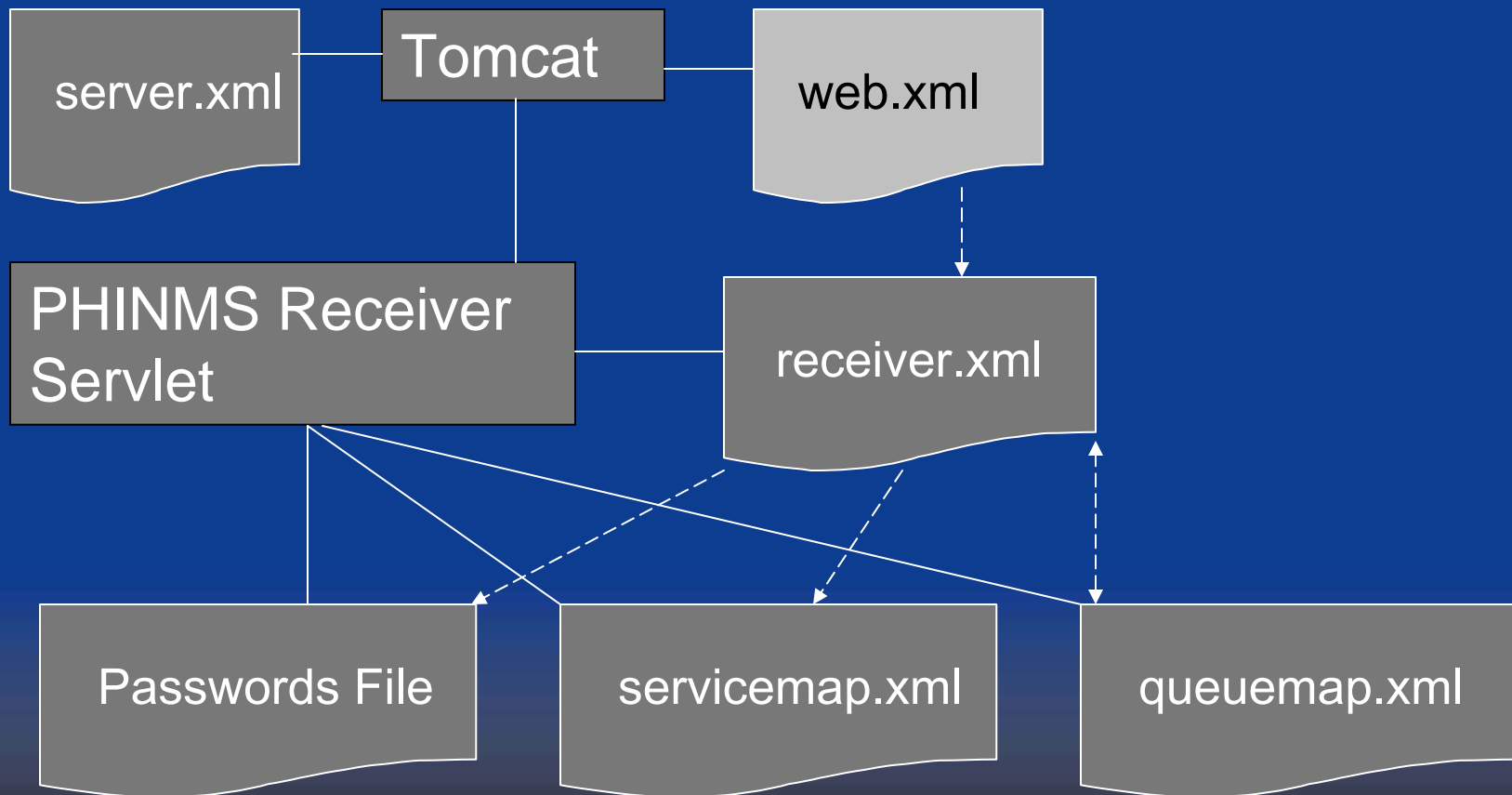


# Configuration Files





# Configuration Files





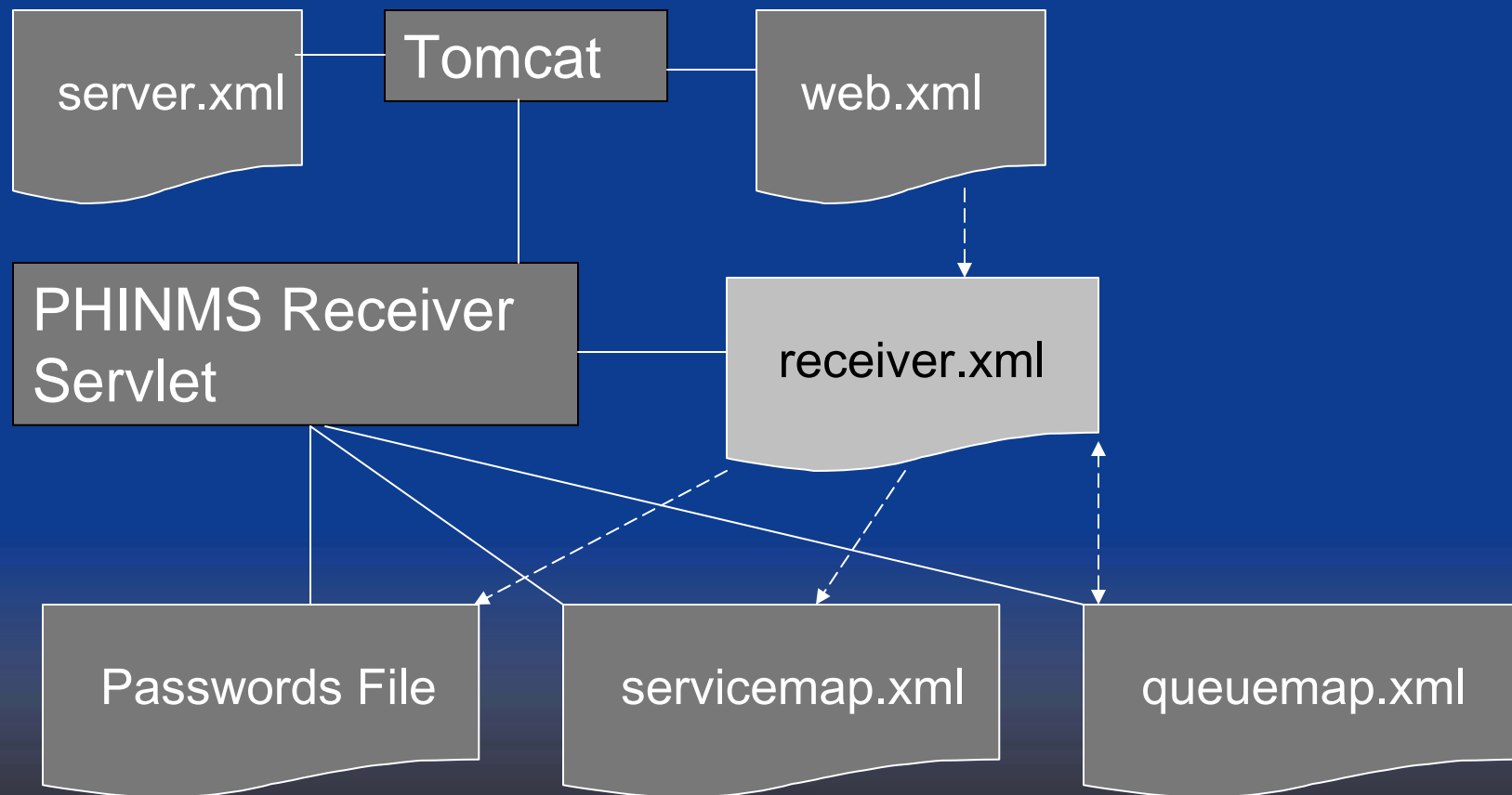
```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE web-app
  PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application 2.2//EN"
  "http://java.sun.com/j2ee/dtds/web-app_2_2.dtd">
<web-app>
  <servlet>
    <servlet-name>
      receivefile
    </servlet-name>
    <servlet-class>
      gov.cdc.nedss.services.filerecv.ReceiveFileServlet
    </servlet-class>
    <init-param>
      <param-name>receiverConfig</param-name>
      <param-value>c:\phinms\server\config\receiver.xml</param-value>
    </init-param>
    <load-on-startup>
      1
    </load-on-startup>
  </servlet>
  <servlet-mapping>
    <servlet-name>
      receivefile
    </servlet-name>
    <url-pattern>
      /receivefile
    </url-pattern>
  </servlet-mapping>
</web-app>
```

web.xml

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# Configuration Files



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# receiver.xml

▪ Deployment Directories	▪ Party Id of the receiver
▪ System Logging Level	▪ Location of servicemap.xml file
▪ Password File Cipher Key	▪ Keystore Information
▪ Location of CPAs	▪ Trusted Keystore Information
▪ Location of passwords file	▪ Domain Settings
▪ Logging directory	▪ Timeout Settings
▪ Queue Mappings	▪ Database Pools

```
<Receiver>
<myPartyId>receiver</myPartyId>

<logDir>c:\phinms\server\logs\</logDir>
<logLevel>info</logLevel>

<serviceMap>c:\phinms\server\config\servicemap.xml</serviceMap>
<queueMap>c:\phinms\server\config\queuemap.xml</queueMap>
<passwordFile>c:\phinms\server\config\receiverpasswords</passwordFile>

<keyStore>c:\phinms\server\config\dummykeystore.pfx</keyStore>
<keyStorePasswd>keyStorePasswd</keyStorePasswd>
<trustStore>c:\phinms\server\config\cacerts</trustStore>
<trustStorePasswd>trustStorePass</trustStorePasswd>

<key>2o3i23</key>
<seed>151209139182126100100162</seed>

<appLevelCaching>true</appLevelCaching>
<persistentCache>
<dbType>sqlserver</dbType>
<jdbcDriver>sun.jdbc.odbc.JdbcOdbcDriver</jdbcDriver>
<databaseUrl>jdbc:odbc:receiver</databaseUrl>
<databaseUser>accessDbUser</databaseUser>
<databasePasswd>accessDbPasswd</databasePasswd>
</persistentCache>

<databasePool>
  <database>
    <databaseId>receiver</databaseId>
    <dbType>access</dbType>
    <poolSize>1</poolSize>
    <jdbcDriver>sun.jdbc.odbc.JdbcOdbcDriver</jdbcDriver>
    <databaseUrl>jdbc:odbc:receiver</databaseUrl>
    <databaseUser>accessDbUser</databaseUser>
    <databasePasswd>accessDbPasswd</databasePasswd>
  </database>
</databasePool>
</Receiver>
```

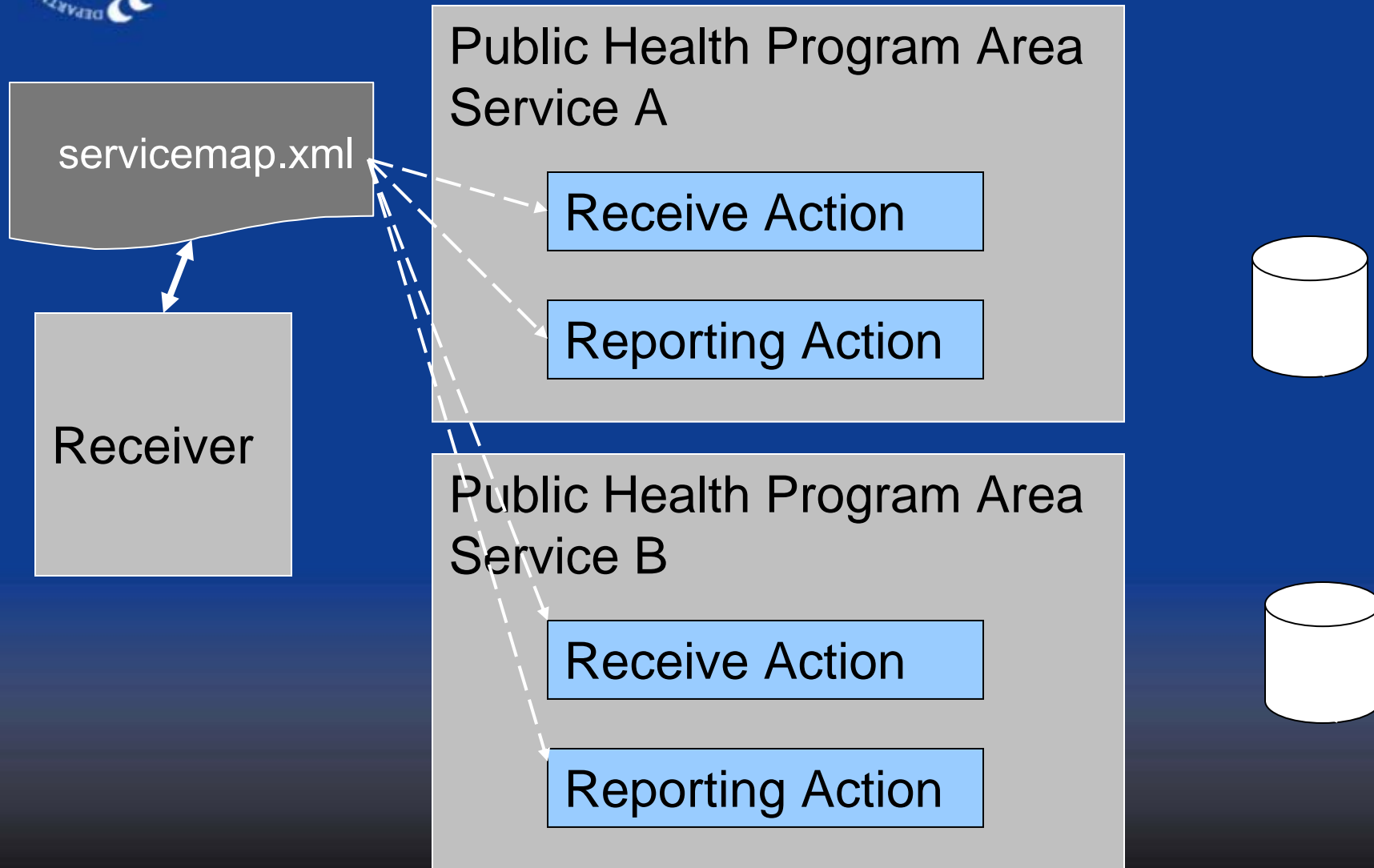


# servicemap.xml

- Maps incoming service requests with specified Message Handlers.
  - ◆ Queue Based Handlers (database)
  - ◆ Message Handlers (URLs)



# Service Action Mappings

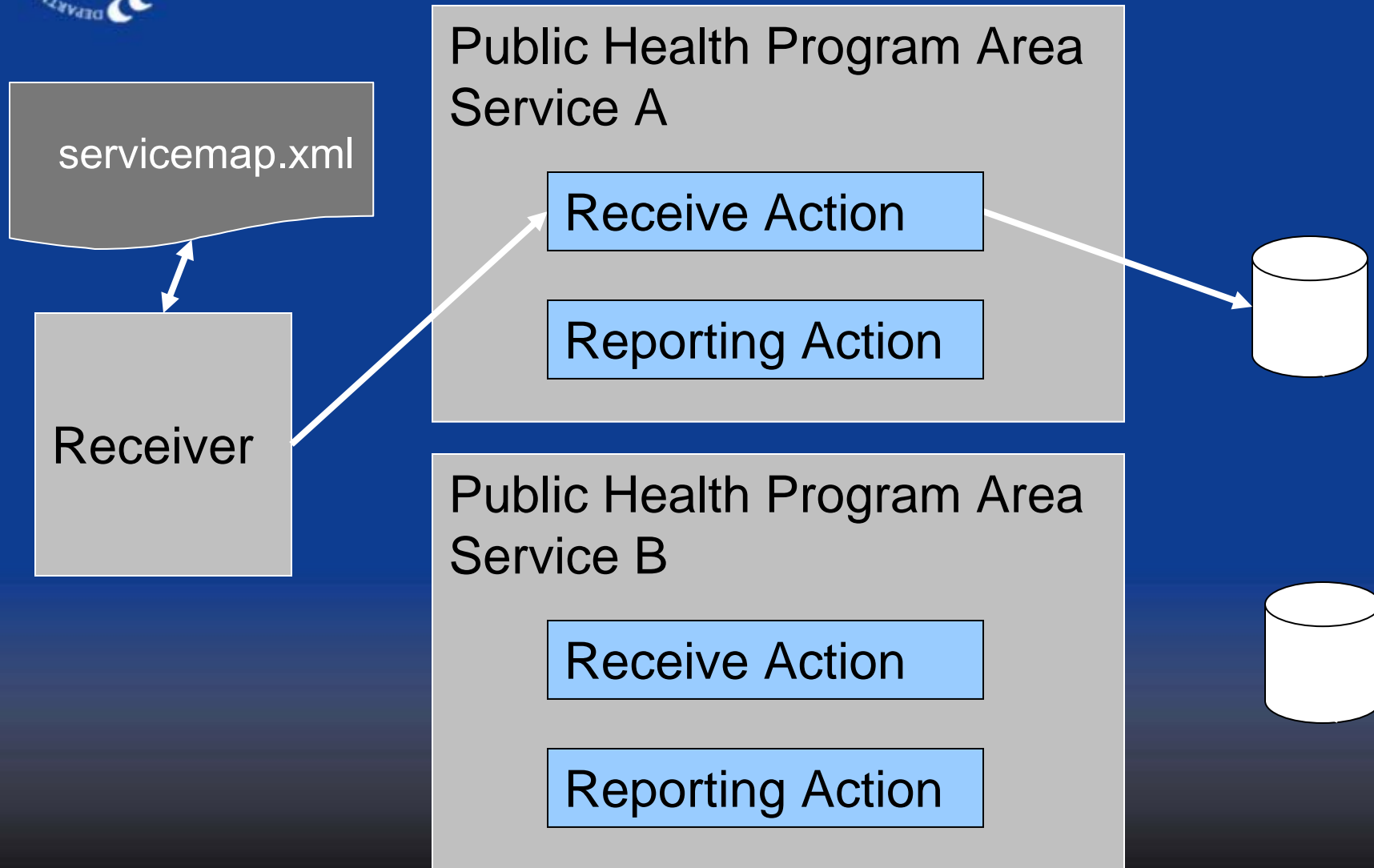


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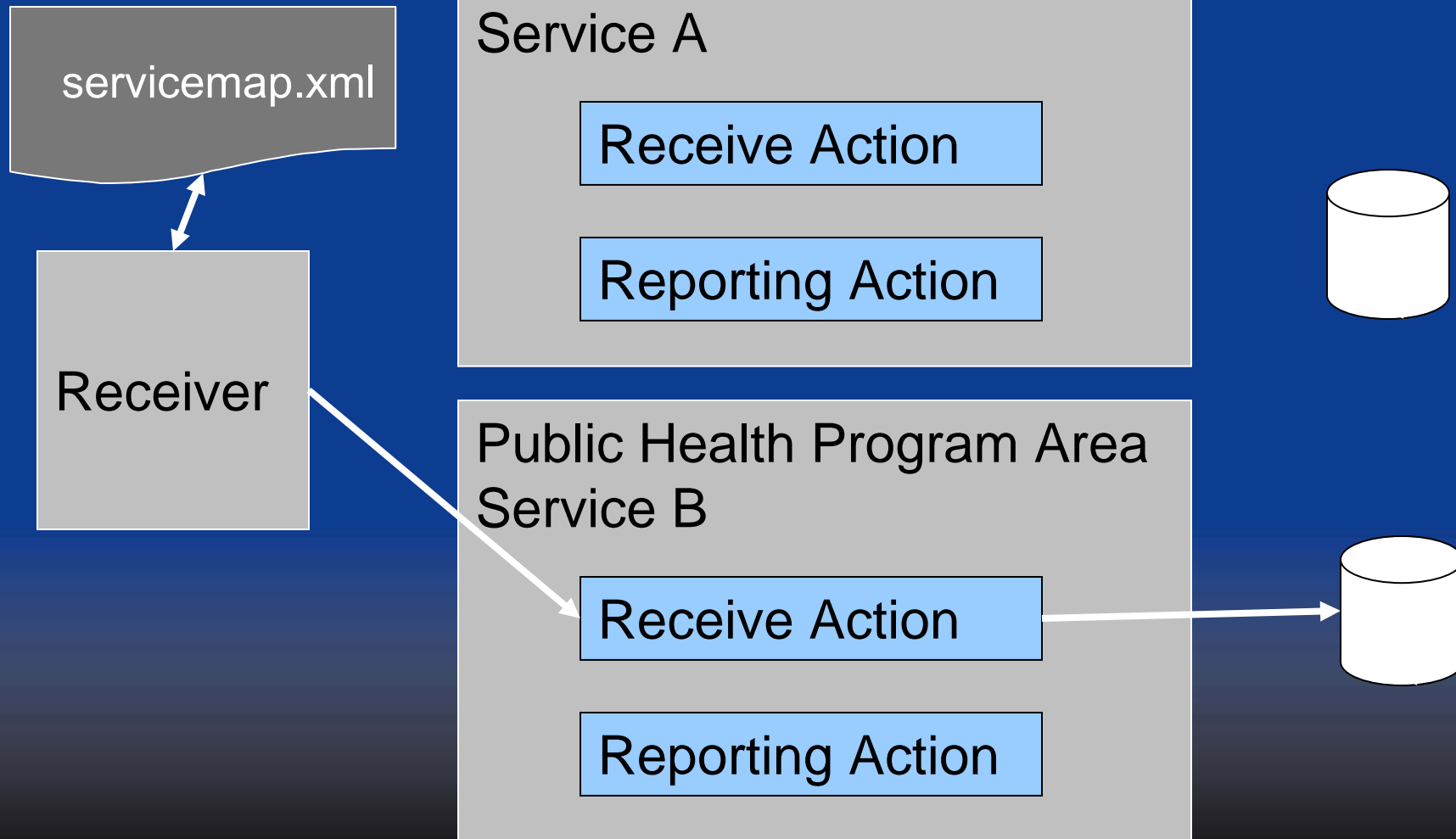
# Service Action Mappings



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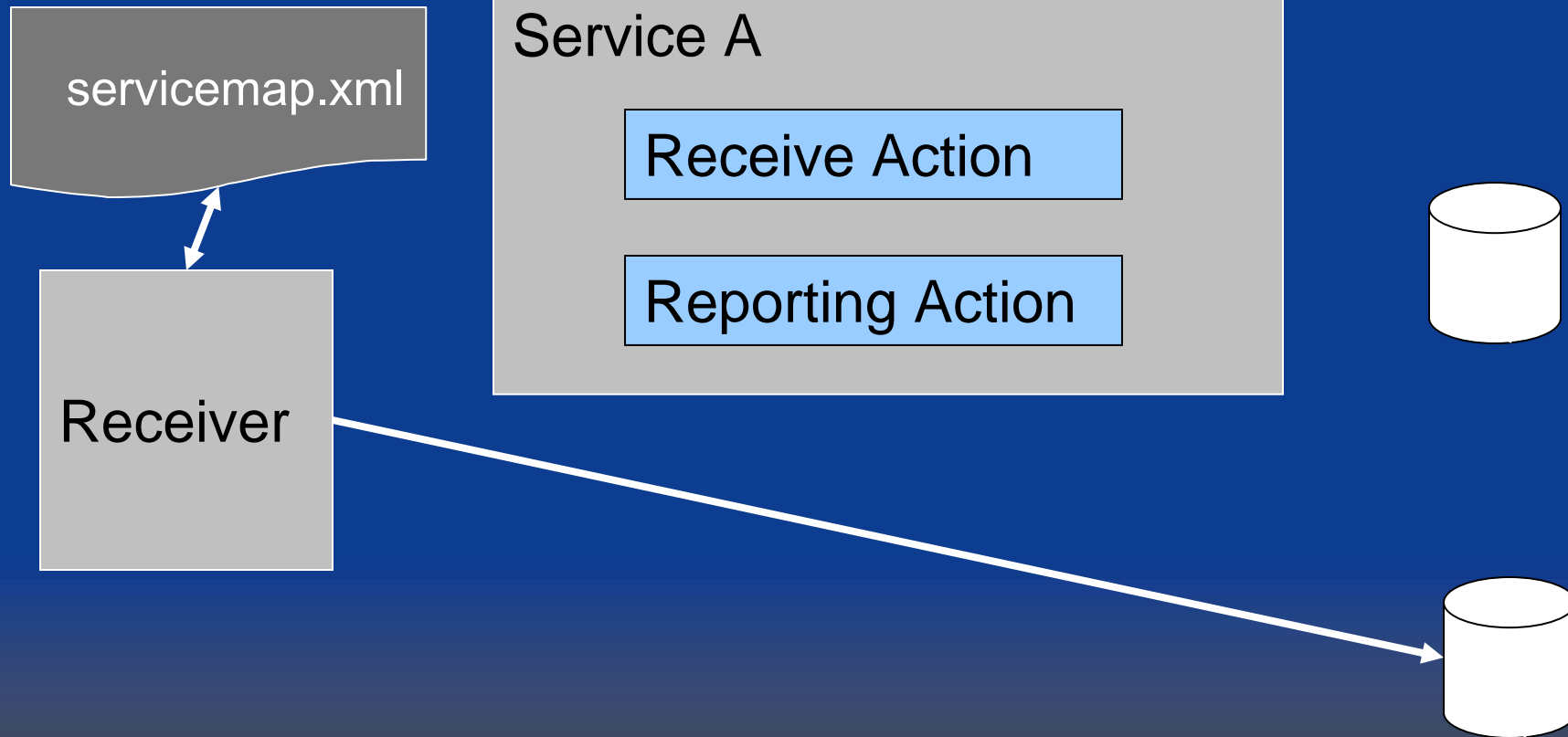
# Service Action Mappings



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# Service Action Mappings



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```
<ServiceMap>

  <ErrorQueue>
    <QueueId>QID789</QueueId>
  </ErrorQueue>

  <Service>
    <Name>FileTransfer</Name>
    <Type>Servlet</Type>
    <Action>
      <Name>test</Name>
      <Url>http://localhost:8080/messagehandler/messagehandler</Url>
      <Argument> </Argument>
    </Action>
  </Service>

  <Service>
    <Name>QueueTransfer</Name>
    <Type>WorkerQueue</Type>
    <payloadToDisk>true</payloadToDisk>
    <textPayload>true</textPayload>
    <Action>
      <Name>test</Name>
      <QueueId>worker_queue_1</QueueId>
    </Action>
  </Service>

</ServiceMap>
```

servicemap.xml

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# queuemap.xml

- Maps a queue to a database and its associated queue table.
- Only needed when queue based handlers are used.

<QueueMap>

<workerQueue>

<queueId>worker\_queue\_1</queueId>

<databaseId>receiver</databaseId>

<tableName>worker\_queue\_1</tableName>

</workerQueue>

<errorQueue>

<queueId>error\_queue</queueId>

<databaseId>receiver</databaseId>



<tableName>error\_queue</tableName>

</errorQueue>

</QueueMap>

queuemap.xml

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```
<databasePool>
  <database>
    <databaseId>receiver</databaseId>
    <dbType>access</dbType>
    <poolSize>1</poolSize>
    <jdbcDriver>sun.jdbc.odbc.JdbcOdbcDriver</jdbcDriver>
    <databaseUrl>jdbc:odbc:receiver</databaseUrl>
    <databaseUser>accessDbUser</databaseUser>
    <databasePasswd>accessDbPasswd</databasePasswd>
  </database>
</databasePool>
```

DB entry in receiver.xml

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# Database Connection

- Microsoft Access
  - ◆ Test Purposes
- SQLServer
- Oracle
- Table creation scripts in Server Installation Guide
  - ◆ Appendix A - E





# Create ODBC Connection



- Use Windows Data Source (ODBC) utility
- Windows Start Menu navigate to
  - ◆ Settings
  - ◆ Control Panel
  - ◆ Administrative Tools
  - ◆ Data Sources (ODBC)

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# ODBC Microsoft Access Setup

Data Source Name: receiver

Description: PHINMS Receiver Database

OK

Cancel

## Select Database

Database Name

receiver.mdb

receiver.mdb

Directories:

c:\phinms\server\data

c\  
PHINMS  
server  
data

OK

Cancel

Help

☐ Read Only

☐ Exclusive

List Files of Type:

Access Databases (\*.mdb)

Drives:

c:

Network...

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How does a service  
access its passwords file?

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# Key and Seed Values

```
<key>2o3i23</key>
```

```
<seed>151209139182126100100162</seed>
```

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Command Prompt - substitute.bat

C:\PHINMS\client\cmds>substitute.bat

C:\PHINMS\client\cmds>call setenv.bat

C:\PHINMS\client\cmds>set installDir=C:\PHINMS\client\

C:\PHINMS\client\cmds>set PROJLIB=C:\PHINMS\client\lib

C:\PHINMS\client\cmds>set JAVA\_HOME=C:\PHINMS\client\lib\jdk

C:\PHINMS\client\cmds>set PATH=C:\PHINMS\client\lib\jdk1.4\b  
\system32

C:\PHINMS\client\cmds>java -classpath -Xmx256M gov.cdc.nedss  
ncryption.SubstitutionCipher

Enter substitution cipher key: \_

# substitute.bat

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Command Prompt - substitute.bat

C:\PHINMS\client\cmds>set PROJLIB=C:\PHINMS\client\lib

C:\PHINMS\client\cmds>set JAVA\_HOME=C:\PHINMS\client\lib\jdk

C:\PHINMS\client\cmds>set PATH=C:\PHINMS\client\lib\jdk1.4\b  
\system32

C:\PHINMS\client\cmds>java -classpath -Xmx256M gov.cdc.nedss  
ncryption.SubstitutionCipher

Enter substitution cipher key:2o3i23

Enter Password to be Encrypted:test

Password must have a minimum of 8 characters.

Password must contain atleast one number.

Enter Password to be Encrypted:

# substitute.bat

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Command Prompt - substitute.bat

C:\PHINMS\client\cmds>call setenv.bat

C:\PHINMS\client\cmds>set installDir=C:\PHINMS\client\

C:\PHINMS\client\cmds>set PROJLIB=C:\PHINMS\client\lib

C:\PHINMS\client\cmds>set JAVA\_HOME=C:\PHINMS\client\lib\jdk

C:\PHINMS\client\cmds>set PATH=C:\PHINMS\client\lib\jdk1.4\b  
\system32

C:\PHINMS\client\cmds>java -classpath -Xmx256M gov.cdc.nedss  
ncryption.SubstitutionCipher

Enter substitution cipher key:2o3i23

Enter Password to be Encrypted:adf231ewr\_

substitute.bat

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Command Prompt

```
C:\PHINMS\client\cmds>set installDir=C:\PHINMS\client\  
C:\PHINMS\client\cmds>set PROJLIB=C:\PHINMS\client\lib  
C:\PHINMS\client\cmds>set JAVA_HOME=C:\PHINMS\client\lib\jdk  
C:\PHINMS\client\cmds>set PATH=C:\PHINMS\client\lib\jdk1.4\b  
\system32  
  
C:\PHINMS\client\cmds>java -classpath -Xmx256M gov.cdc.nedss  
ncryption.SubstitutionCipher  
Enter substitution cipher key:2o3i23  
Enter Password to be Encrypted:adf231ewr  
Encrypted string = 147211153155101100151230165  
  
C:\PHINMS\client\cmds>
```

<key>2o3i23</key>

<seed>151209139182126100100162</seed>

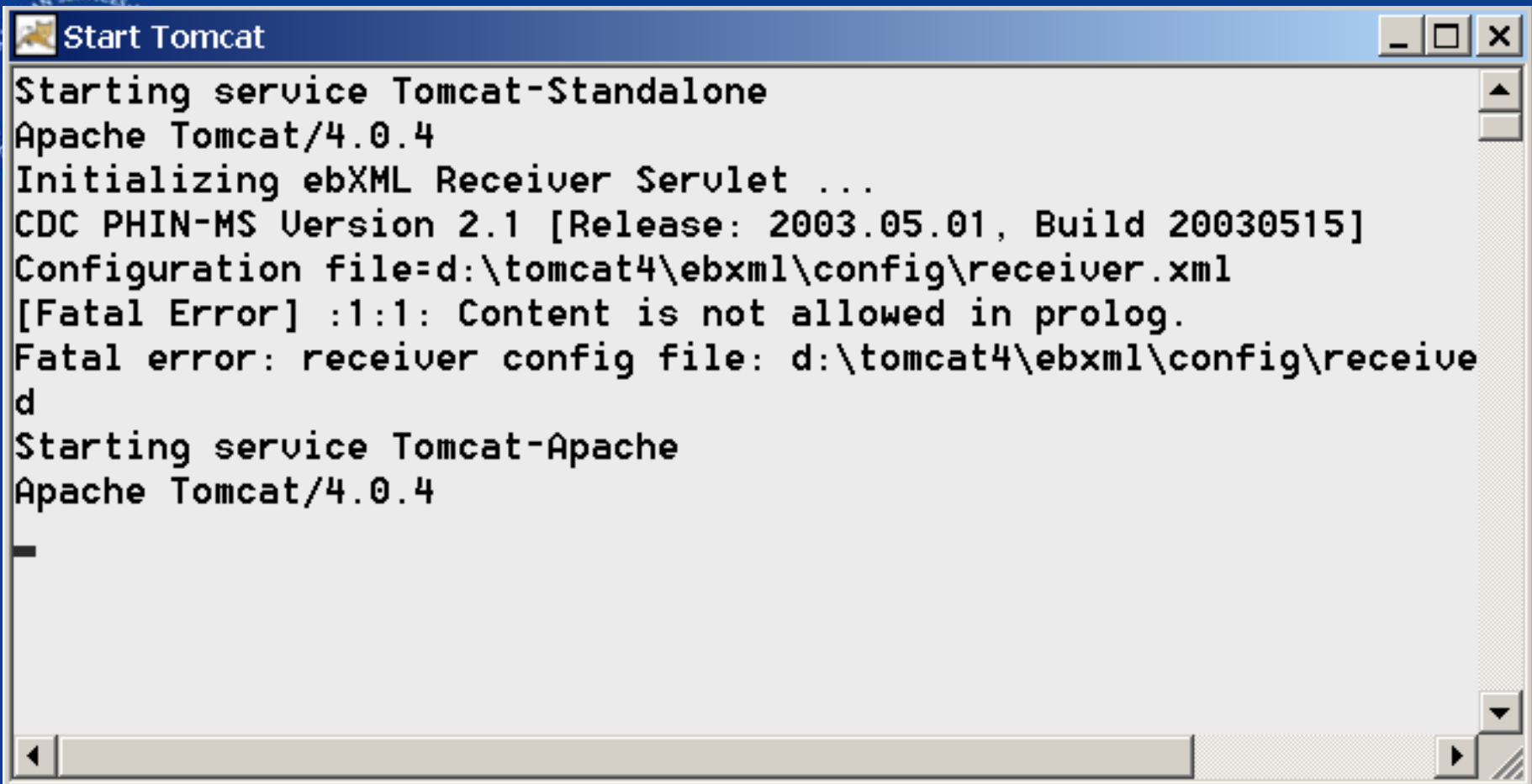
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# Deploy Receiver Servlet

- Copy phinms21.war to Tomcat's webapps directory
- Restart Tomcat

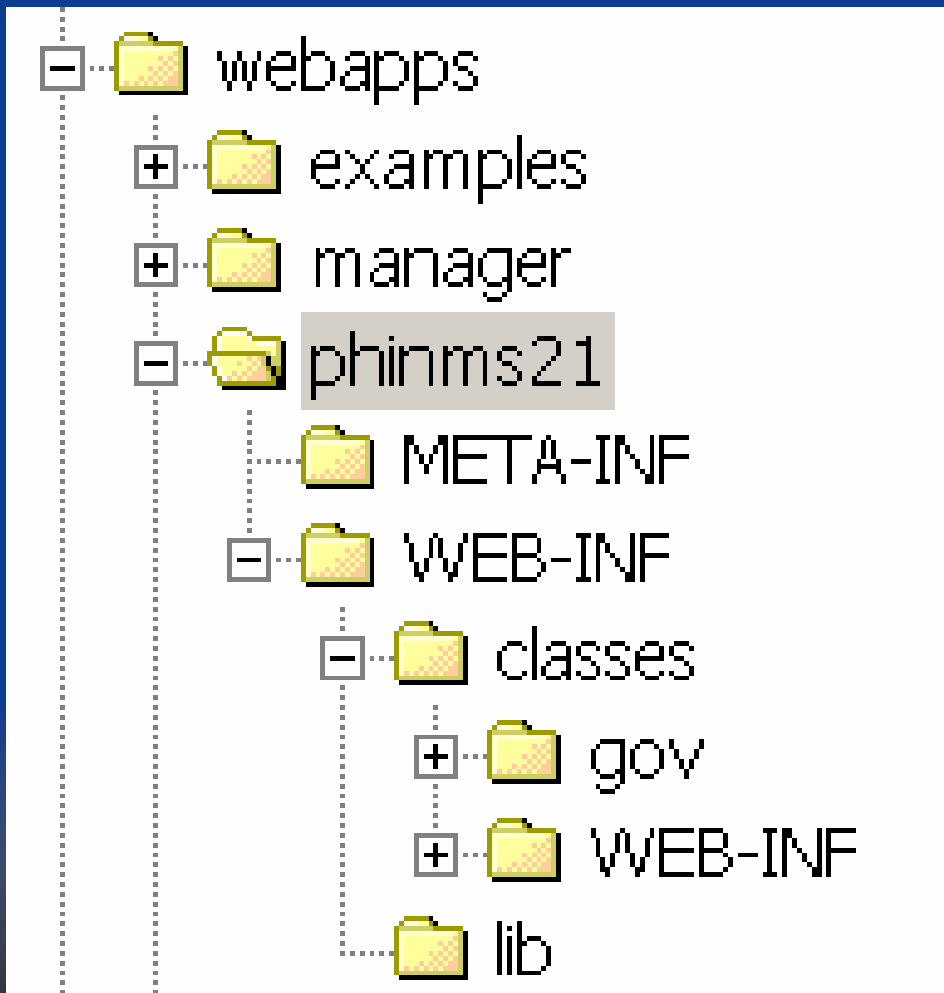


```
Start Tomcat
Starting service Tomcat-Standalone
Apache Tomcat/4.0.4
Initializing ebXML Receiver Servlet ...
CDC PHIN-MS Version 2.1 [Release: 2003.05.01, Build 20030515]
Configuration file=d:\tomcat4\ebxml\config\receiver.xml
[Fatal Error] :1:1: Content is not allowed in prolog.
Fatal error: receiver config file: d:\tomcat4\ebxml\config\receiver.xml
Starting service Tomcat-Apache
Apache Tomcat/4.0.4
```

Ignore Error Message



# Deployed Servlet





# Configure Receiver

- Edit web.xml file
- Edit server.xml file
- Create database connection to receiver.mdb



# Edit Web.xml

- Navigate to Receiver servlet's WEB-INF directory
- Open web.xml with text editor
- Change receiverConfig parameter to point to receiver.xml in PHINMS\server\config directory.

```
<servlet>
  <servlet-name>
    receivefile
  </servlet-name>
  <servlet-class>
    gov.cdc.nedss.services.filerecv.ReceiveFileServlet
  </servlet-class>
  <init-param>
    <param-name>receiverConfig</param-name>
    <param-value>c:\phinms\server\config\receiver.xml</param-value>
  </init-param>
  <load-on-startup>
    1
  </load-on-startup>
</servlet>

<servlet-mapping>
  <servlet-name>
    receivefile
  </servlet-name>
  <url-pattern>
    /receivefile
  </url-pattern>
</servlet-mapping>
```



# Edit receiver.xml

- Navigate to PHINMS\server\config directory
- Open receiver.xml with text editor
- Modify
  - ◆ Keystore Entries
  - ◆ Database Entries
  - ◆ Seed and Key Values



# Test Configuration

- Startup Receiver
- Edit database entry in Sender's TransportQ\_out
  - ◆ Set processing status to "queued"
- Monitor should reflect successful message transport Check
- Receiver's queue for message





# Where To Get More Information



- ebXML
  - ◆ [www.ebxml.org](http://www.ebxml.org)
- Interoperability
  - ◆ [www.ebusinessready.org](http://www.ebusinessready.org)
- PHINMS Documentation
  - ◆ [www.cdc.gov/phinf/messaging](http://www.cdc.gov/phinf/messaging)
- [PHINTech@cdc.gov](mailto:PHINTech@cdc.gov)

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